

WIN
£600

Worth of Prizes
only in the
EXPRESS
SUMMER
GIVE-AWAY
Page 16

COMPUTER EXPRESS

BRITAIN'S BIGGEST SELLING COMPUTER WEEKLY

AMIGA

- A-Max II arrives
- Voice recognition
- Vietnam war sim

ST

- Auto-clean mouse
- Play Core Wars for £3
- Atomix: chemical fun

PC

- IBM PS/1 add-ons
- Guinness CD-ROM
- £700 A4 portable

CONSOLES

- Super Famicom pic
- Grey Sega sensation

CPC

- Sensible's 3D Tennis

Specialist Columns for:
SPECTRUM • C64 • MSX • PCW •
QL • SAM • BBC • ARCHIMEDES

DO A DEAL!

32 bargain-packed pages in

**SHOPPING
EXPRESS**



PICK OF THE POCKETS

Five miniature machines on test — how do they size up to serious use? **page 56**

IS JUSTICE OUT OF BALANCE?



Computer owners hemmed in
by legal minefield

- Hacking Bill becomes law
- Data Protection Act abused
- Euro MPs attack piracy
- More 'look and feel' litigation
- New police powers **page 3**

DESKTOP VIDEO ON THE AMIGA

page 55

Make your own movies with the VideoCenter

PLANETARY NETWORK LOOMS

page 4

Analysts predict the global computing village



CONTENTS

FEATURES

MENTAL GYMNASTICS 16

Computerised brain gyms offer a mental tune up

FORE PLAY 50

A new golf game hits the streets – the best yet?

SYNCH PULSES 55

Turn your Amiga into an editing suite

TAKE NOTES 56

Five tiny pocket computers put to the Express test

REGULARS

NEWS 2-6

COMPETITION 16

Win a brain machine

TECH TIPS 52

SUBSCRIPTION OFFER 54

LETTERS 60

COMMENT & ARCHIVE 62

SHOPPING EXPRESS

BUYERS' GUIDE 19

DTP, graphics and digitisers

READER ADS 28

EXPRESS SALES 38

EXPRESS JOBS 46

PUBLIC DOMAIN 44

YOUR MACHINE

AMSTRAD CPC 9

SPECTRUM 10

SAM COUPE 10

AMSTRAD PCW 10

MSX 10

BBC MICRO 11

COMMODORE 64 11

SINCLAIR QL 11

ARCHIMEDES 11

PC COMPATIBLES 12

AMIGA 14

ATARI ST 16

Book of Records disk due on PC and CDTV

MIRRORSOFT MOVES DEEP INTO CD-ROM

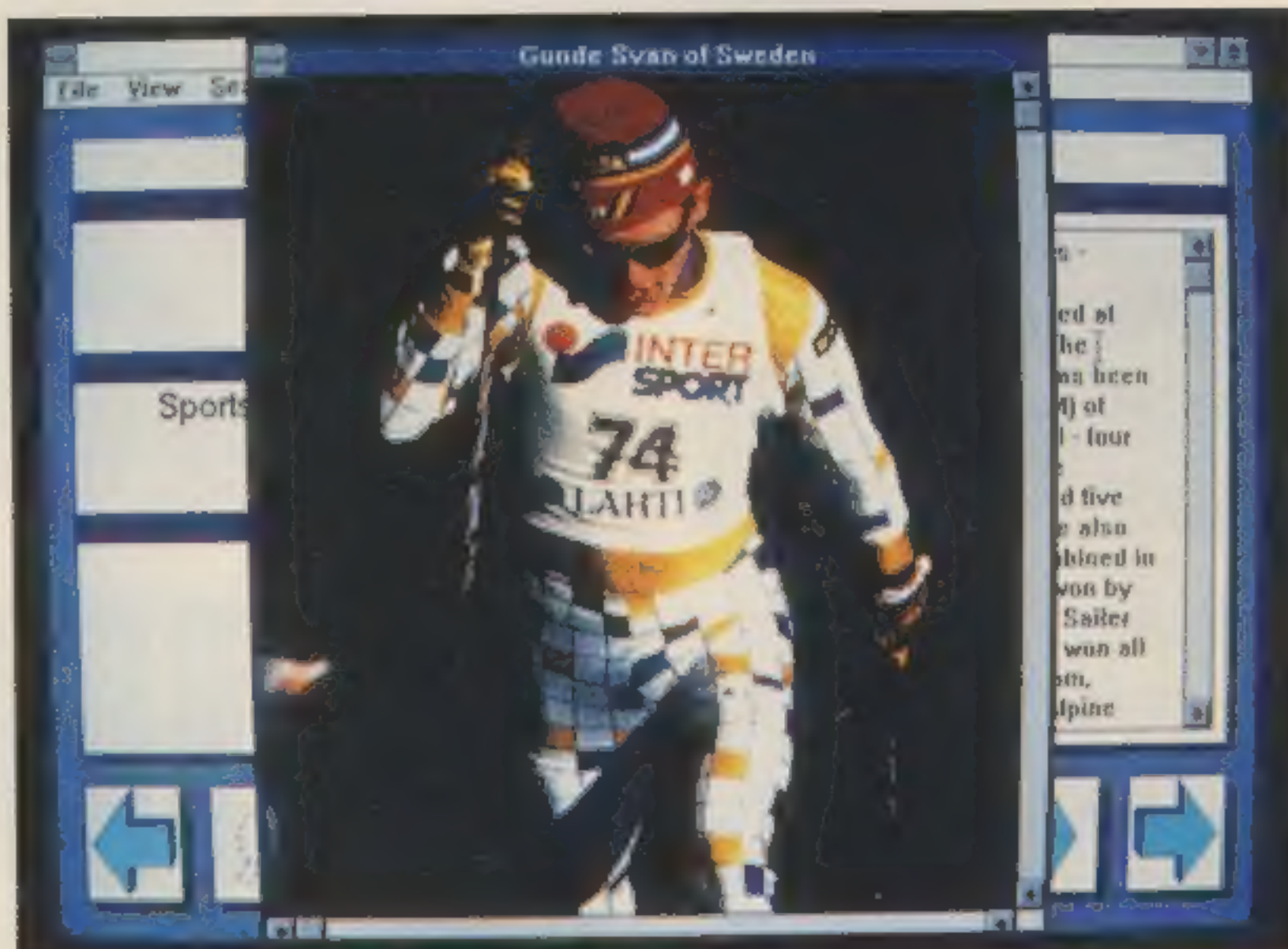
Top publisher Mirrorsoft is to extend its commitment to the rapidly growing CD-ROM format with a version of *The Guinness Disc Of Records* for the PC. A version for Commodore's Amiga-based CDTV is also under active consideration.

The new disks represent part of a growing trend towards CD-ROM as a media for the transmission of complex multimedia information.

The Macintosh version of *The Guinness Disc of Records* recently won an award from an international CD-ROM conference as the 'best achievement in mixed media'. Mirrorsoft claims that, unusually, the PC-compatible version will be even more user friendly than the Apple software.

The £99 disk features over 440Mb of text, pictures and sounds covering 4,000 different record topics. The material incorporates the full text of the British, American and Australian versions of the book.

Some five months in development, the CD-ROM data has been converted from the Mac version with a Windows front end replacing HyperCard. Utilising Windows 3's virtual memory, the PC version will be able to play sound and show animated screens simultaneously. The



• Mirrorsoft's new PC CD-ROM contains 300 high-resolution pictures of record breakers.

disk will combine three graphics modes to display either 256, 16 or 4 colours depending on the capabilities of the host computer.

Mirrorsoft is well known as a pioneer in the CD-ROM field. In conjunction with Cinemaware, it released the world's first

CD-ROM game – *Defender of the Crown*. Now the company is looking at CDTV, CD-Interactive and FM Towns titles, but as spokesman John Norledge told *Express*, "We'll be making announcements when we're ready... we don't want to produce vapourware". ■

NEW NINTENDO – FIRST PICTURE



• The giant Japanese console corporation Nintendo will be releasing its long-awaited 16-bit Super Famicom games machine the US and UK late next year. Although cartridges will be incompatible with existing Nintendo Entertainment Systems, the projected price point – around £100 – should nevertheless ensure good sales. While the unit may have twice the screen resolution and twice the power of its predecessor, it doesn't seem to have twice the looks. ■

Arc CD-ROM drive offers custom disks

A new CD-ROM drive for the Archimedes comes with the offer of having your own CD pressed for just £170.

Next Technology of Cambridge normally offers the chance to have your own CD-ROM disk printed for £220 by way of a system called *Pressed for Time*. Purchasers of the CD-ROM drive get £50 off a *Pressed for Time* disk.

The £995 drive, jointly developed by Acorn and Next Technology, will fit the Archimedes and BBC A3000 and is capable of storing 550Mb of data.

The information held on the disk includes photographs, high quality audio, text or a combination of all three. It also comes with Compact Disc Filing System (CDFS) software. This enables the drive to read information from any standard CD-ROM formats.

Using the software, and the CD interface card which comes with the drive, up to 20 CD players can be 'daisy chained' at any one time. If you don't want prying eyes – or school children's fingers – to get hold of your disks, the eject button can be disabled.

For more information on *Pressed for Time* and the CD-ROM drive is available on 071-833 3441. ■

Legal moves in the computer world about to bring change

HACKING: A NEW LAW AND CALL FOR EXTRA POWERS

In a week that has seen several legal initiatives to clean up computing, there has been a call for new police powers to enforce the provisions of the Computer Misuse Act, which received Royal Assent last week.

Hacking, defined as the unauthorised access to a computer system for whatever purpose, will finally be illegal when the Act comes into force at the end of August, but at least one MP feels that the police need additional powers.

In an interview with Express, Emma Nicholson MP revealed her intention to add tough new clauses to the Criminal Justice Bill scheduled for the Queen's Speech this November.

"I'm delighted we've got so far so fast, but we've still got further to go," Nicholson said.

"We need further police powers which are more appropriate to the electronic age rather than to the age of the burglar". Her proposals are likely to include amendments concerning telephone tapping and surveillance which she failed to move into the new Act.

Although Nicholson wanted surveillance and phone tapping, police powers under the new Act are limited to the search of premises and the seizure of

materials and equipment, and then only with a warrant from a judge.

The Police are currently assessing their approach to enforcing the new laws. Alison Bland, spokesperson for Scotland Yard's Computer Crime Squad, currently the only unit of its kind in the country, told Express that policing of the new law will be regionally-based with local fraud squads responding to reported incidents of hacking.

"Time will tell if the law is unworkable or not... it's still far too early to say" she stated.

Large companies with the resources to pursue hackers may be the prime initiators of prosecutions under the Computer Misuse Act.

The Police would appear to be short of appropriately skilled manpower - even the main unit at Scotland Yard has only four officers, leading to suggestions that, as in the US, the Police would need to train officers in the skills of hacking or be forced to seek assistance from third party security agencies.

Ironically, many such companies are themselves staffed by professional hackers contracted to search for valuable data from competitors' systems.

One hacker contacted by Express poured scorn on the proposed policing of the Act. "It won't make any difference at all... they would have to have a row of bobbies in every telephone exchange monitoring every line to stand a chance of catching anyone who matters."

"Sure they might pick up a few amateurs like Whitely and Singh but the professional hacker will continue to work behind the facade of notoriety, doing the job and getting paid handsomely. The new law will make little difference."

● Three new criminal offences are created by the Computer Misuse Act, which allows organisations or individuals to bring prosecutions for illegal access to computer systems.

After August 29, using a computer without the owner's permission could result in a fine of up to £2000 or up to six months in prison.

More serious offences - modifying 'the contents of a computer', or accessing a computer with the intention of committing or facilitating the commission of further offences - carry a maximum penalty of up to five years in prison or an unlimited fine.



• Emma Nicholson MP: calling for additional police powers in the war against hacking.

Whitehouse in data drama

In a twist to the continuing controversy over data protection and the individual's right to data privacy, an attempt is being made to bring a private prosecution against Mary Whitehouse and the National Viewers And Listeners Association (NVLA).

It seems the association doesn't appear in the legal register of computer-using bodies, despite being known to have a database of names and addresses of members involved in work against depraved or unseemly broadcasting.

The twist in the tale is that, instead of following the 'usual channels' by going to the Data Protection Registrar, David Northmore, author of the Freedom Of Information Handbook, has taken his complaint straight to the Director Of Public Prosecutions (DPP).

An NVLA spokesman told Express that, "As far as we're concerned our executive committee members, who are conversant with the details of the Data Protection Act, assure us that we are operating within certain exemptions to the Act, and that's all we're prepared to say."

The spokesman said that the system is a "simple desktop PC system with a database program running on it" and that "the gentleman concerned obviously decided to bring the private prosecution before having the courtesy to consult us about our position."



• Whitehouse: controversial computer use?

NVLA is unwilling to divulge any details of exactly what it is they have on file. When asked about the Whitehouse case, a spokesman for the Data Protection Registrar commented: "It seems like an odd choice. The majority of people bring their complaints to us, rather than the DPP. The first thing we are going to do is check whether the NVLA, Mary Whitehouse is under investigation."

Whether or not Mr Northmore feels that information concerning him is held by the NVLA is unknown.

Euro-pirates to face the fire

The European Parliament is to debate a proposal to standardise the copyright law as it applies to computer software, with a view to bringing laws in all member states into line with UK practice.

The problem is that in the EEC copyright laws vary so widely that in some countries, including Spain, Portugal and Scandinavia, it is legal to copy anything you like, and even sell it in shops. Indeed in Greece and Italy there are no copyright laws whatsoever with respect to software. At the other end of the scale, in West Germany copyright legislation is fixed at such a high level that even well-known publishers would be hard pushed to prove they had marketed an original product.

Bob Hay of the the UK's Federation

Against Software Theft which has submitted written evidence to the Commission, told Express, "It's likely that British copyright laws will be adopted by the EC as they're comprehensive and appeal to the US. In Europe, on the one hand you have Greece which has never been a signatory to an international copyright convention, and Germany where copyright's so tight it's possible even Lotus 1-2-3 wouldn't get copyright protection".

The report, written by Portuguese Liberal MEP Mrs Margarida Salema, will be debated on July 9; the vote will be taken two days later. An EC Directive could be finalised by October making it incumbent on all member states to adopt its dictates.

COPYCATS COUNTERED

Following its successful suit against Paperback Software and Mosaic in which Lotus established 'look and feel' copyright for its 1-2-3 spreadsheet, the Lotus Development corporation is now suing Borland International and The Santa Cruz Operation for copyright infringement.

Lotus claims that Borland's Quattro and

Quattro Pro, like Santa Cruz's SCO Professional, infringes the copyright established by the case against Paperback, in which the judge ruled the menu command structure and user interface of 1-2-3 were copyrightable features.

"The suit is without merit," commented Borland's founder Philippe Kahn.

Revamped Amiga Mac emulator arrives

Following the limited success of Readysoft's A-Max Apple Macintosh emulator cartridge on the Amiga, a new version is about to be released. The combination of software and hardware allows you to run Macintosh software as if it were running on a normal Mac Plus.

The first A-Max was a good emulator, but couldn't access hard disks, and couldn't use Mac hardware such as serial ports, LaserWriters, MIDI and SCSI devices. The A-Max II features fixes of all the major problems with the original unit, and will be available in two versions for A500 and B2000 machines.

The A-Max II model for A500 will be a cartridge similar to the previous A-Max, which plugs into the disk drive port and allows connection of both Amiga and Mac external drives. The A-Max II Plus for the B2000 or Amiga 3000 is a heavily-enhanced version of the same device mounted on a full length card to fit in the internal Amiga slots. On the card version you

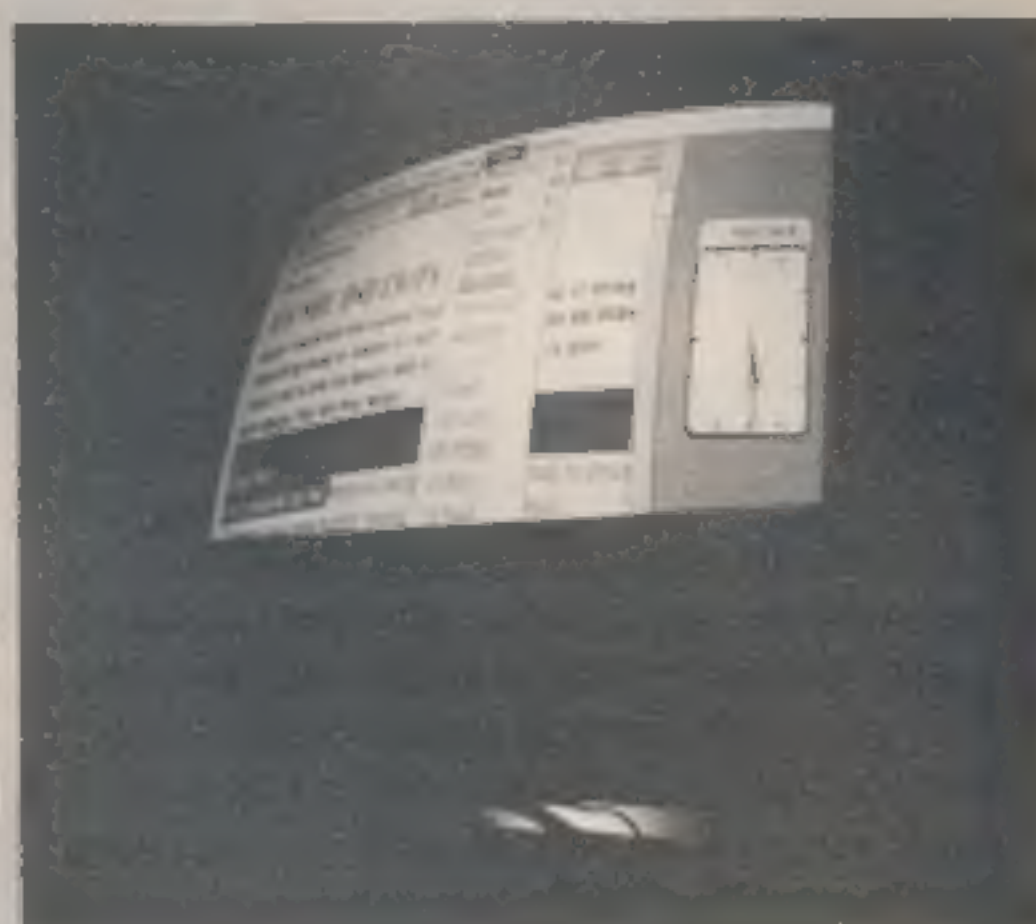
have the addition of two Mac-format serial ports, Appletalk and MIDI compatibility, and the ability to use Mac disks.

Other new features include the facility to partition your Amiga hard disks to use part of them for installing professional-quality Mac software, direct printing to LaserWriters and ImageWriters, access to Apple SCSI devices through the Amiga hard disk SCSI port, support for Amiga accelerator boards, and full support for Mac digitised sound.

With these additions the A-Max is now a fully compatible Mac emulator, allowing Amigas to be integrated into Mac environments in the home or office, and also allowing Amiga users to 'own' a Mac for about a quarter of the price.

A-Max for the A500 will cost £269.95 with the essential Mac ROMs, while the B2000 version will be £349.95. The release date is set for late July for A-Max II, November for the Plus, and you can contact distributor EI on 0268 541126.

• A-Max: improved version this month.



• Imported Megadrives can run new software.

Grey Segas can use new games

Contrary to official statements, grey imports of the Sega Megadrive 16-bit games console are able to run the 'legal' cartridges.

The only difference, according to Express sources, is a notch on the cartridge of the grey imports. This notch can apparently be filed into the cheaper official cartridges in a matter of minutes. The cheaper cartridges will then run in the grey imported machine.

Though it may be possible to persuade the official cartridges to run on a machine imported from Japan, the Japanese machine has no PAL connections for a TV and can only be used through a TV or monitor with a SCART connection or similar.

Try before you buy

The concept of try-before-you-buy is now becoming common practice among software firms. Mindscape International has released two demo versions of top-selling Mindscape packages: Zing and World Atlas.

World Atlas is an atlas and gazetteer program for the PC, and the demo contains all the features of the real thing but with access limited to information about South America.

Zing is a 3D presentation graphics generator on the Macintosh or PC, for slide or DTP use. For more details contact Mindscape on 0444 486545.

Networks take off as communications expand

COMPUTERS LINKED ACROSS THE GLOBE

According to data analysed by Sapphire International, over half of the major companies using PCs have some sort of networking, and most companies who haven't are planning networks in the next few years.

Sapphire's data shows that almost 50 per cent of corporate computer users have their PCs connected to mainframe or minicomputers.

This upsurge in communications among individual computers is causing the definition of a large machine to be rewritten. Computers are gradually being connected together in a matrix that will soon allow over users all over the world to access what is essentially the same system.

The international telephone system is already reckoned to be the world's largest machine, but trans-global data transmis-

sion could double in volume in the next five years.

• The growth of the personal computer market will slow dramatically in the early Nineties – but still double to 239 million machines by 1994, according to research company Dataquest.

It predicts that the trend towards a slow down will be bucked by notebook-sized portables. As computers get smaller the demand for processing power on the move will get greater, and portables will take 15 per cent of the PC market – 14.8 million machines – by 1994.

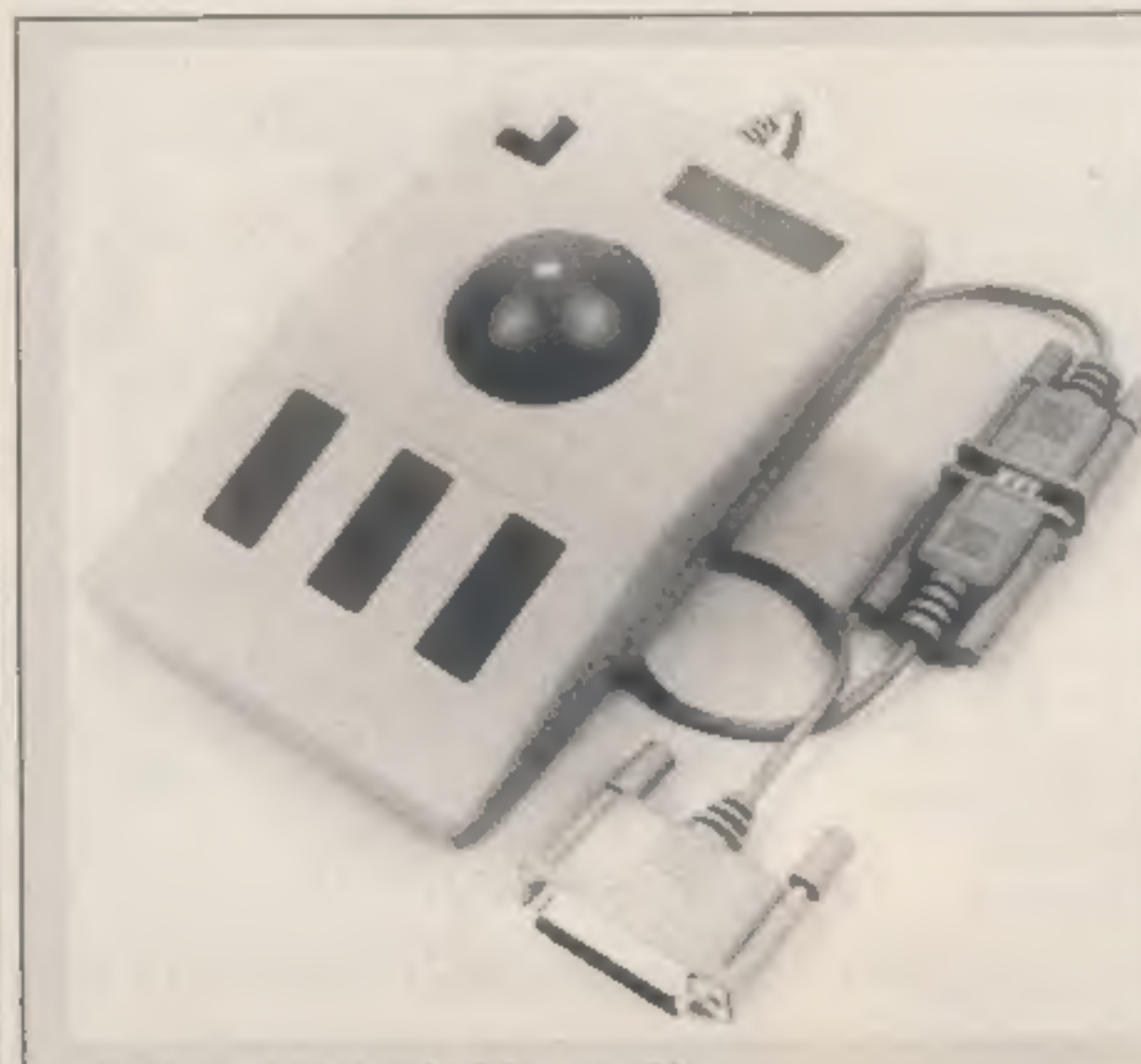
Dataquest analyst Steve Lair said: "It doesn't mean that every man, woman, child and parakeet in the world will have a computer on their desk, but we expect a significant rise in the number of computer products in the next four years."

Dataquest is also predicting that the



• Portables will be the growth area in the '90s.

home and education markets will see a large amount of growth in the early part of the decade.



• Maplin's tracker ball for PC compatibles.

Maplin's alternative to the mouse

After years of being frivolously related to such arcade classics as Missile Command, the tracker ball is at last gaining respectability after being incorporated into the latest trendy portables. Electronics wizard Maplin has picked up on this trend with the launch of its new PC compatible three-button tracker ball.

The major advantage of a tracker ball over a mouse is the fact that a mouse requires desk space in order to move around the computer screen. The tracker ball, on the other hand, sits in one place, taking up hardly any space.

The Maplin device also comes with a 'drag' button. This locks down and helps the user to undertake tasks such as drawing long lines.

The tracker ball costs £59.95, and will fit any PC which has an unoccupied serial port. For more information you should contact Maplin Electronics on 0702 553935.

MICRO TO STAR IN SATELLITE TV SHOW

As The Technology Channel will broadcast to French, Italian, German and

Until now the only regular television programming specifically targetted at the individual with an interest in computers has been Micro Live from the BBC. Although several ITV companies explored the possibilities of regular TV shows on computers in the mid-80s, mainstream TV has largely ignored computing.

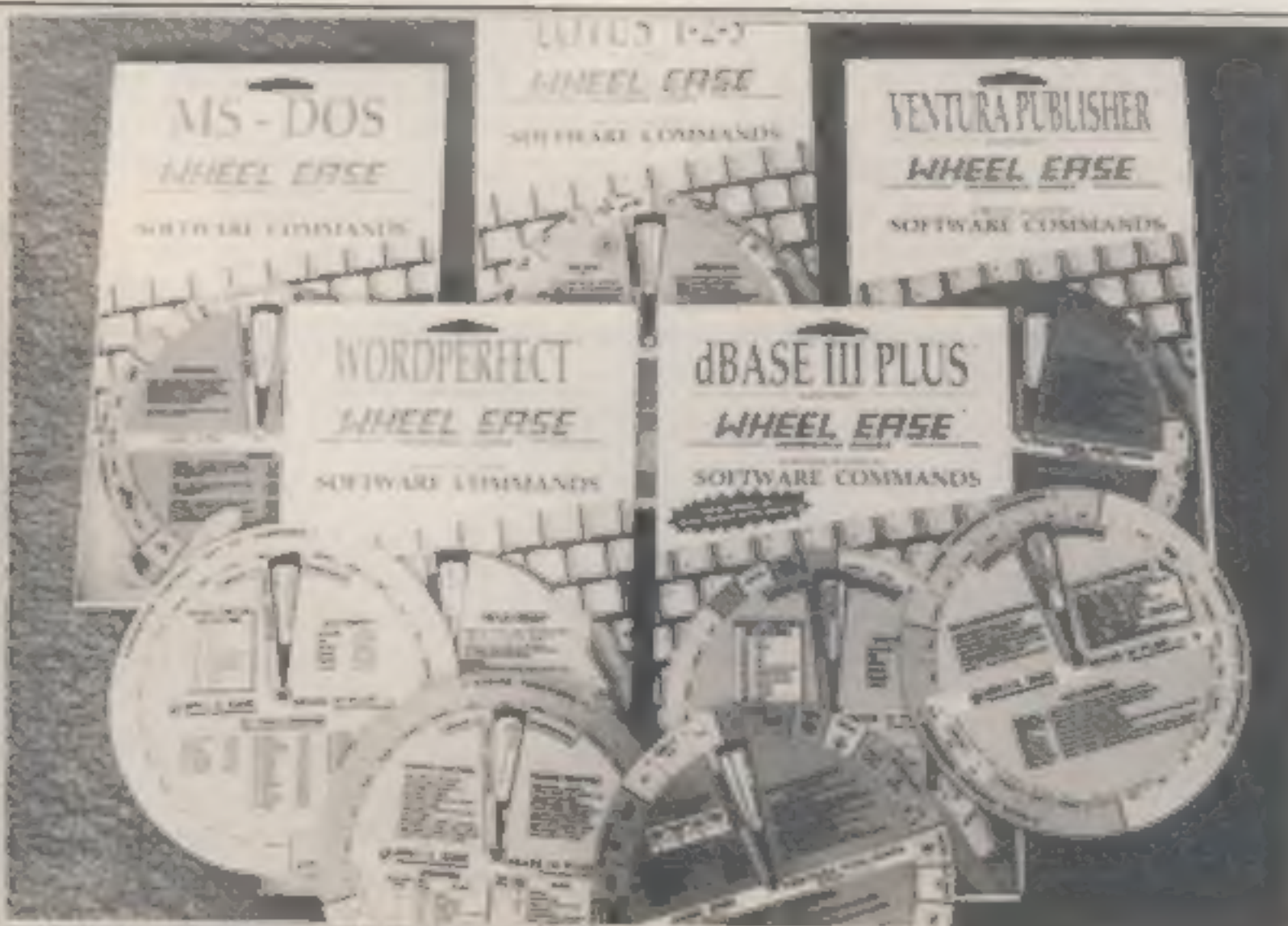
For more information, contact the Technology Channel care of the European News Network, 24 south Frederick Street, Dublin 2, Ireland. You may telephone 353 1 679-5350 or fax 353 1 679-1593.

The fax board costs £399. Datafax will set you back £95.00 and the error correction kit goes for £159.95. For more information, phone Action Computer Supplies on 081-903 3333. ■



The next fair will held at the extra-large Royal Horticultural Hall, Greencoats Street, London on the weekend of the August 4 and 5. Contact John Riding on 0225 447453.

For more details, call the Computer Reference company on 061-627 5314.



- Reference in the round: the circular software manual.

It's not clear yet whether the upgrades will find UK distribution. ■



Like a S.e.X. machine

Dolan Electronics has announced availability of its new 16MHz 386 S.e.X. machine, a £770, 1Mb PC compatible bundled with mono monitor and 5.25 inch drive.

At a price claimed to be the lowest in the UK market for such equipment, the S.e.X. can be upgraded to a system with 21Mb hard disk, colour VGA monitor and 20Mhz processor for an additional £615 – considerably cheaper than current full specification 386sx systems. ■

New lasers

Apple is about to unveil two new low-cost laser printers for £1,175 and £1,940. The more expensive model includes Adobe's PostScript interpreter.

The move appears to fall in line with the company's intention to offer a low-end modular Macintosh later this year. Apple's laser printer sales account for some thirty per cent of the company's \$5.7 billion turnover – and 12% of the total laser printer market.

PC package fails to achieve expected impact

COMMODORE SLICES ITS STARTER PRICE

In the face of falling PC sales, Commodore Business Machines (CBM) has cut the price of its Starter Pack range.

August 1st will see the price of the entry-level, dual-drive PC10 and PC20 XT clones with mono monitors dropping by £100 – to £499 and £699 respectively. The price of the more powerful PC30286 will fall by £300, making it available in the shops for £899.

The Starter Packs were launched four months ago with an ambitious £3 million advertising campaign, but have not had the impact on the business market that might have been expected, given the ad spend.

Commodore has claimed that the price cuts are merely the second stage of a three-part marketing strategy aimed at raising the company's profile in the business hardware market.

However, a recent independent survey of PC sales shows that Commodore's grip on the market has slipped from 1.4 per cent in March to an undignified 'Others' rating in April.



The figures, which were produced by Wharton Information Systems, also show that IBM has managed to maintain a strong lead with a 13.1 per cent share in March rising to 19.3 per cent in April. Olivetti also enjoyed a 7.4 per cent rise in

market share, while Amstrad slipped by 2.4 per cent, to a 13.3 per cent share of the PC market in April.

As this issue went to press, representatives of Commodore were unavailable for comment. ■

Give a monkey an Apple Mac and she will read her books

A Californian gorilla is being taught to use a computer to 'read' picture books.

Project Koko is a unique experiment in animal intelligence – a 12-year old gorilla called Koko is being taught to use a specially-adapted Apple Macintosh interactively.

The project is under the wing of computer-scientist-cum-freaky-ideas man, Alan Kay, as part of his work in Apple Computer's 'far out ideas' department.

Kay freely admits that in his line of work only very few of the ideas he generates come to anything, but his past record shows it pays to experiment.

Koko the gorilla is already famous in

US scientific circles for learning over 900 words in American sign language, and for having her own pet kitten and a collection of picture books which she 'reads'.

It was the gorilla's liking for picture books that partially inspired the project, an Alan Kay figured they could somehow be stored on computer and used to test her comprehension of such a system. The books were turned into a HyperCard stack, and the machine modified – Koko operates the Mac by touching buttons on the screen.

As with Kay's previous work, results from Project Koko may be used by Apple's Advanced Technology Group to improve future user interfaces. ■

Amstrad multimedia

While announcing the mould-breaking £399 'Double Decker' video recorder – the first major innovation in the VCR market for years, Amstrad seems to have overlooked the unit's potential for the fledgling area of desktop video.

Offering users dual monitor or TV displays and tape to tape editing, the Double Decker will also allow desktop directors the means of using digitisers, genlocks and titling software to master computer-controlled videotape productions quickly and cheaply. Up to 16 hours of recordings can be made.

For desktop presentation, the machine also looks more than promising – a user can continuously loop between tape decks to provide non-stop playback for point of sale and information applications.

Of course, other observers may



• The Amstrad Double Decker: offering a simple means of mastering Desktop Video.

take a somewhat less favourable view of the machine. The Double Decker would seem to make life a little easier for video pirates. Amstrad is at pains to point out the law against copying pre-recorded videos, but the advent of tape-to-tape video machines could easily lead to the same abuses as those facilitated by dual audio tape recorders.

ATARI ST and C- AMIGA

Sixteen Bit Superdeals from the Sixteen Bit Specialists!
CUSTOMERS PLEASE NOTE! When comparing prices remember ours include fast delivery by courier.

NEW!!

520STE Power Pack £349.00

Inc. VAT and Next Day Delivery

**NOW INC
HYPERPACK**

Power Pack includes:

- ★ 520STE 512K Keyboard with Built-in 1 Megabyte disk drive and TV Modulator
- ★ Over £550 worth of games software, including OutRun, Gauntlet 2, R-Type, Space Harrier, Super HangOn and 16 more Top Games
- ★ Organiser Business Software including WORDPROCESSOR, SPREADSHEET and DATABASE
- ★ First BASIC and First Music Utility Software
- ★ FREE JOYSTICK AND FREE MOUSE MAT WORTH £4.95
- ★ All leads, manuals PLUS MOUSE and free mains plug!
- ★ Hyper Pack S/W inc Hyper Draw, Hyper Paint and Borodino Battlescape War Game worth over £70.00

520STFM DISCOVERY PACK £279.00

NEW

NEW! fantastic value for money pack includes:

- ★ 520 STE 512K memory keyboard with built in 1 megabyte double sided disk drive and TV modulator
- ★ Game Pack including OUTRUN, SPACE HARRIER, CARRIER COMMAND and BOMB JACK
- ★ UTILITY PROGRAMMES inc STOS GAME CREATOR, NEOCHROME painting package and FIRST BASIC programming language
- ★ ST tutorial programme and 'DISCOVER YOUR ST' beginners guide to the ST computer
- ★ PLUS MOUSE, MOUSE MAT, MANUALS, ALL LEADS, METACOMCO BASIC AND MAINS PLUG!

1040STE BUSINESS PACK £449.00

- ★ Includes the new 1 megabyte 1040STE keyboard plus over £200 worth of business software including K-WORD wordprocessing software, K-CALC spread sheet and K-DATA Database software Also includes Metacomco BASIC, Mouse Pad, all Leads, Manuals and Mouse.

MEGA 1 BUSINESS Pack £529.00

Features:

- ★ Separate Keyboard and System Unit
 - ★ Inc. all software supplied with 1040 STE Business Pack
 - ★ Blitter chip installed for faster graphics
- Inc SM124 Mono Monitor.....£628.00*

ACCESSORIES

Quickshot II Turbo Joystick.....£9.95	Branded Memorex 3.5" DSDD Disks
Competition Pro 5000 Joystick.....£13.95	Box of 10.....£13.95
Competition Pro with Autofire.....£14.95	Memorex Disk Box
Konix Speedking Joystick.....£11.95	For 40 3.5" Disks.....£8.95
Red Mouse Mat with Amiga logo.....£5.95	Amiga 1/2 Meg Expansion.....£99.95
Plain blue Mouse Mat.....£4.95	Control Centre Atari or Amiga.....£44.95
Naksha Mouse for ST, Amiga or PC.....£29.95	
Contriver Amiga and ST Mouse with FREE Holder and Mouse Pad £20.95	

PRINTERS

Star LC10 including interface lead for ST/Amiga.....	£169.00
Star LC10 colour including interface lead for ST/Amiga.....	£219.00
Star LC24-10 24 pin including lead for ST/Amiga.....	£249.00
Citizen 120D + NLQ including interface lead for ST/Amiga.....	£139.00
Citizen Swift 24 pin letter quality including lead for ST/Amiga.....	£309.00
Colour Version of Swift 24 pin.....	£349.00

AMIGA A500 GAMES PACK

**featuring BAT PACK or the new
FLIGHT OF FANTASY PACK
£399.00**

Inc. VAT and Next Day Delivery

BAT Games Pack includes:

- ★ Amiga A500 512K Keyboard with Built-in 1 Megabyte disk drive.
- ★ Free TV modulator worth £24.99 allowing you to use the Amiga with a normal TV.
- ★ DELUXE PAINT II GRAPHICS PACKAGE.
- ★ FREE HOLIDAY 14 days accommodation
- ★ FREE, only-just-released BATMAN - THE MOVIE games software.
- ★ NEW ZEALAND STORY arcade games software.
- ★ F18-INTERCEPTOR - amazing 3D flight simulator software.
- ★ A further £230 worth of Games Software, including BUGGY BOY, MERCENARY, BARBARIAN, WIZBALL & six more games.
- ★ FREE JOYSTICK, MOUSE MAT AND 10 BLANK DISKS.
- ★ Amiga BASIC, Amiga EXTRAS 1.3, Workbench 1.3 PLUS the Amiga Step by Step Tutorial.
- ★ All leads, manuals PLUS MOUSE and mains plug!

FLIGHT OF FANTASY Pack includes:

- ★ F29 RETALIATOR - fantastic NEW flight simulator - replaces Batman
- ★ RAINBOW ISLANDS - smashing new arcade game - replaces New Zealand Story
- ★ ESCAPE FROM THE PLANET OF THE ROBOT MONSTERS - replaces F18
- ★ Everything else listed for BAT Games Pack.

AMIGA 1 MEG BAT GAME PACK £499.00

1 Meg Bat Games Pack includes:

- ★ Fitted 1 Megabyte Memory Expansion + Real Time Clock Card
- ★ Everything listed for the A500 Bat Game Pack
- ★ DRAGON'S LAIR 1 MEG MEGAGAME!

AMIGA A500 CLASS OF THE 1990'S BUSINESS + EDUCATIONAL PACK £549.00

FEATURES:

- ★ Amiga A500 + TV Modulator
- ★ Midi Interface + Software
- ★ Kind Words II word processor
- ★ Page Setter DTP
- ★ Super Base Personal Database
- ★ Maxiplan 500 Spreadsheet
- ★ Amiga Logo, BBC Emulator, Deluxe Paint II
- ★ Mouse mat, 10 blank disks and disk wallet

EXTERNAL DISK DRIVES

Cumana 1 Megabyte Atari or Amiga.....	£89.95
NEC 1 Megabyte Atari or Amiga.....	£79.95
Atari SF314 1 Megabyte.....	£139.00
Amiga A1010 1 Megabyte.....	£99.95
Atari Megafile 30 Hard Disk.....	£439.00
New! Commodore A590 20 meg hard disk.....	£369.00
A590 Hard Disk + Memory Upgrade installed.....	Phone

MONITORS

Commodore Amiga A1084 stereo Monitor inc lead.....	£259.00
Atari SC1224 Colour Monitor inc lead.....	£259.00
Atari SM124 Mono Monitor including lead.....	£119.00
Philips CM8833 stereo colour monitor inc. lead for ST or Amiga.....	£249.00

24 HOUR CREDIT CARD HOTLINE ☎ 0908 378008

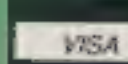
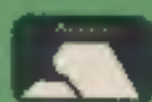
To order either call the orderline above with your Credit Card details OR make a cheque or P.O. payable to:
 Digicom Computer Services Ltd and send it with your order to the address below. Showroom open at the address below Mon-Sat 10.00am - 6.00pm.

DIGICOM

Unit 36, Wharfside, Fenny Stratford, MILTON KEYNES, MK2 2AZ.

All prices include VAT and delivery by courier

*Licensed Credit Brokers * Written quotations available on request APR 34.5% Variable.*



AMIGA



LISTEN HERE, AMIGA!

Computer voice recognition technology is still very much in its infancy. When you think about it, the problem of interpreting each word of a spoken sentence is fairly easy to overcome once you've solved the problem of handling variations in speech – accents, harmonics, etc.

For a computer to react and carry out tasks by actually understanding what you have said is still a long way off, however; we're talking true artificial intelligence here, which poses problems that software and hardware engineers have yet to overcome.

With its enormous processing power and sophisticated A to D technology, the Amiga seems like a natural medium for such developments. Thus it should come as little surprise that Impulse has released the first step towards grander horizons with the VoRecOne (VRO) system for the Amiga family of computers.

The package consists of a small box that plugs into the second joystick port of the Amiga, a microphone and the program disk. Before you can even start, you must teach VRO a few key words.

VRO samples your voice and stores it as a sound profile. Once you've taught it to understand your voice, you can then assign the different voice commands to actions. For example, if you taught VRO the word 'Files', it could be set up to

display a list of files in the current directory.

When in use, VRO samples your voice and compares the digital data with all the sound profiles that you have created. If a close match is found (it would be impossible for you to say the same word exactly the same a second time!), VRO carries out the pre-programmed task.

When used in conjunction with multi-tasking, VRO can control just about any program from spoken commands. You could for example teach VRO the entire alphabet and then write documents within a word processor just by spelling each word out orally.

A device such as VRO could revolutionise Amiga multimedia. Used in conjunction with something like Amiga Vision on the 3000, a true man-machine interface could be established, banishing for good such archaic devices such as the keyboard and mouse. As you can probably start to appreciate, the possibilities are simply mind boggling!

To date, no one has picked up the UK distribution rights, but for those of you who can't wait for such an event, Impulse! can be contacted on 0101 612 566 0221. Price is \$160.

DEVPAC FALLS ON 030

Oh deary me. According to a well known developer friend of mine, HiSoft's integrated assembler development system Devpac 2 seems to have run into problems with the recent release of the 68030-based Amiga 3000. Although HiSoft has been one of the most active campaigners for legal applications that abide by Commodore's standards, it seems the company have encountered problems with its own product on the 3000 – basically, it doesn't work. In a very hush hush manner, the company has now fixed the problem and is offering an Amiga 3000-friendly version to registered users for an upgrade price of £5.

DTP WAR HOTS UP

SoftLogic Corporation has announced the release of a major upgrade to its PageStream Amiga desktop publishing package. PageStream version 2 features many bug fixes (which were

desperately needed) plus a whole host of new features.

In light of Commodore US's decision to include outline font support in the next revision of the Amiga operating system, SoftLogic has jumped on the bandwagon by providing direct support for Agfa/Compugraphic fonts such as those used by that other DTP hard hitter, Professional Page. To avoid claims of following a standard set previously by its main competitor (Gold Disk Inc), SoftLogic has also built in support for Adobe Type 1 fonts such as those used extensively on the IBM. This basically means that Amiga users who also have an IBM can share fonts between the two machines, therefore saving big bucks.

PageStream 2 now includes facilities to allow for absolute precision when laying out documents. PageStream allows for specification of beginning and ending angles of arcs in 1/100 degree increments and allows for rotation in 1/100 degree increments. You can now specify font sizes in 1/100th point increments, and position and size objects to the same 1/100th of a point. That's 1/7,200th of an inch – pretty impressive stuff!

Other new features include considerably larger page sizes and the ability to 'bleed' objects off of the page. Contact SDL on 081-309 1111 for more.

LOST SILVA

For many years, Dan Silva was recognised as one of the major software authors on the Amiga. His paint system, Deluxe Paint (I, II and III), is universally accepted as the Amiga industry standard which has done more to promote the Amiga as a serious graphics workstation than any other applications. However, when I spoke to Dan at the launch of Deluxe Paint III, he hinted that he was considering moving away from the Amiga in favour of the Mac and PC markets.

Now, several months later, it seems that he has done so with the recent news that Dan has parted company with Electronic Arts in the States. Dan is now working on a project for the PC compatibles for the US software developer, Autodesk (developers of the industry-standard AutoCAD system). Those close to Dan hinted that this may not be his last involvement with the Amiga. Let's hope that Dan does come back to his senses as his absence from the Amiga scene is a great loss.

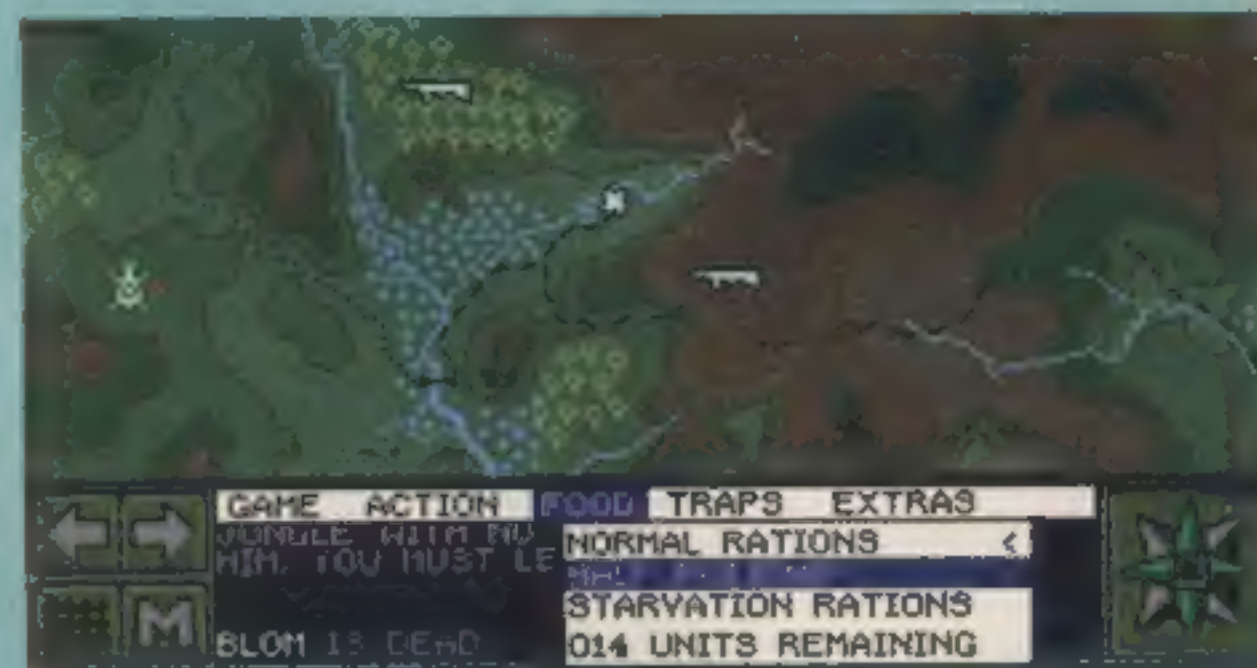
MILLION COLOUR AMIGA

Let's face the facts, 4,096 colours is no longer regarded as state of the art. OK, back in '85, when the Mac was still mono and the PC colour cards were an absolute joke, the Amiga

LOST PATROL

Ocean • £24.99

AMIGA
GAME
WEEK



After months of advertising and more than a few previews, Ocean's long-awaited foray into the Vietnam scene has made its way onto the Amiga in the form of the now finished *Lost Patrol*.

You take control of a team of American soldiers whose transport chopper has come under attack from VC guns. The tail of the helicopter was hit causing the craft to go into a wild spiral and crash. The pilot was killed outright, but the only other injury was some lacerations to one of the troop member's legs. You must now lead your men across the dangerous terrain in an attempt to reach the base at Du Hoc. The game is controlled in most part from a map screen via a series of pull down menus, which are used to issue commands from marching to laying traps.

The quest is by no means easy, as there are swarms of Vietcong waiting in the shadows to attack you and your men. You can post scouts to give early warnings of enemy troops advancing on your position, but occasionally a surprise attack may be launched, causing you to take drastic action. Various action sequences are employed to portray the different battle scenes, for example VC machine gunners need to be taken out by way of a carefully thrown grenade, whereas sharpshooter skills are needed to dispose of the snipers hiding in the village.

Lost Patrol's main strength lies in its presentation. The strategy screens are clear and well drawn and the intermediate screens add to the tense atmosphere superbly, using some excellent animation. Each of the



arcade sequences has its own feel, from the out-and-out blasting of the trench scene, through the sheer concentration of the sniper sequence to the nerve-wracking minefield section.

Very few strategy games manage to combine such variety and sheer visual excellence to as much effect as Ocean has managed with *Lost Patrol*, since the gameplay is every bit as intriguing and involved as the excellent presentation. Even if wargames aren't your 'bag', you could do a lot worse than check out *Lost Patrol* and get involved in the tense and oppressive world of the Vietnam veteran.

Maff Evans



• Dan Silva's DPaint III in action. See *Lost Silva* for more.

reigned supreme. However, these days the joke is on the Amiga. Hopefully Commodore will upgrade the custom chips (again) to handle larger palettes, but until then you'll have to look towards third party developers.

Impulse! Incorporated has announced the release of its DCTV system (not CDTV, that's something entirely different!), which is a slow scan video digitiser that allows you to grab and display 24-bit images directly on your Amiga screen. The DCTV connects to the RGB port of your Amiga and is used

to create the 24-bit screen image from a coded signal generated by the Amiga. Because the Amiga is internally displaying what it sees to be a normal high resolution view, the DCTV is compatible with most paint and animation packages.

For best results, Impulse! has also released several products to accompany DCTV. First up is *DCTV Paint*, a 24-bit paint package. Also planned are *DCTV Animator* and *DCTV RGB Converter*, which gives you analogue RGB video.

Jason Holborn

24-HOUR SERVICE
OPEN: MON - FRI 9.00 - 5.30
SATURDAY 10.00 - 2.00

Business Technology Centre

PHONE OR FAX: 0282 831900

SEIKOSHA SL92
 24 PIN 42K BUFFER 9 FONTS
£299 INCLUDES ON-SITE WARRANTY

DOT MATRIX PRINTERS

9 PIN 80 COLUMN	draft/nlq	£
STAR LC-10	144/36	125
STAR LC-10 colour	144/36	166
STAR LC-10 colour comm	144/36	166
CITIZEN 120D PLUS	120/25	105
CITIZEN 120D PLUS comm 64	120/25	105
CITIZEN PRODOT 9	300/60	265
SEIKOSHA SP2000 (21k buffer)	200/40	199*
SEIKOSHA MP1350	300/50	359*
PANASONIC KXP 1180	192/36	139
MAN. TALLY MT 81	130/26	104
OLIVETTI DM 100SPR	200/30	119*
EPSON LX 400	180/30	135

9 PIN 136 COLUMN		
STAR LC-15	180/45	255
CITIZEN PRODOT 9 x	300/60	345
PANASONIC KXP 1592	216/45	255
SEIKOSHA MP5350	300/50	499*

24 PIN 80 COLUMN		
STAR LC24-10	170/57	195
CITIZEN SWIFT 24	192/64	239
CITIZEN PRODOT 24	200/60	369
PANASONIC KXP 1124	192/63	219
SEIKOSHA SL92 (42k buffer)	240/80	299*

24 PIN 136 COLUMN		
STAR LCX24-15	200/67	325
STAR XB24-15	240/80	510*

*ALL DOT MATRIX PRINTERS MARKED WITH A * INCLUDE A ONE YEAR ON-SITE MAINTENANCE CONTRACT.

A ONE YEAR ON-SITE MAINTENANCE CONTRACT IS ALSO AVAILABLE FOR MOST OTHER DOT MATRIX PRINTERS - ONLY £10.

A FULL RANGE OF SHEET FEEDERS, TRACTORS, ACCESSORIES AND CONSUMABLES ARE ALSO AVAILABLE FROM STOCK - CALL FOR DETAILS.

SWIFT 24 COLOUR
 24 PIN PRINTER INC. COLOUR KIT
£269

TERMS

ALL PRICES EXCLUDE VAT. PRICES AND SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE. CALL TO CONFIRM BEFORE ORDERING. STRICTLY CASH WITH ORDER. ACCESS, VISA AND AMERICAN EXPRESS WELCOME. POSTAL ORDERS, CHEQUES AND BANKERS DRAFTS ACCEPTED. OFFICIAL ORDERS FROM EDUCATIONAL AND GOVERNMENT ESTABLISHMENTS, CORPORATES AND PLC'S WELCOME.

DELIVERY

ALL GOODS NORMALLY DESPATCHED WITHIN 24 HOURS FROM RECEIPT OF CLEARED PAYMENT - subject to stock availability.
 PC'S AND LASERS £15.00 NEXT DAY DELIVERY
 OTHER LARGE ITEMS £10.00 NEXT DAY DELIVERY
 SMALL ITEMS £5.00 4 DAY DELIVERY

WARRANTY

ALL GOODS CARRY MANUFACTURERS WARRANTIES. ON-SITE WARRANTY AVAILABLE ON MOST DOT MATRIX PRINTERS AND PC'S - CALL FOR DETAILS. TECHNICAL SUPPORT AVAILABLE. E. & O.E. Goods not offered on trial basis. Goods are offered for sale subject to our standard terms and conditions of sale - available on request. WE STOCK MANY MORE PRODUCTS - CALL FOR DETAILS. LARGE STOCKS OF FLOPPY DISKS AND RIBBONS CARRIED.

NON-IMPACT PRINTERS

		£
SEIKOSHA	OP105 LED (desktop size, takes legal paper)	1299*
STAR	LASER 8	1179*
STAR	LASER 8 DUAL BIN	1599*
H. PACKARD	LASERJET II	1199*
H. PACKARD	LASERJET III	1299*
OLIVETTI	PG 306	899*
CANON	BJ130 INK JET	519

ONE YEAR ON-SITE MAINTENANCE IS INCLUDED IN THE PRICE OF ALL THE ABOVE PRINTERS MARKED WITH A *.

A FULL RANGE OF TONERS, FONTS, MEMORY CARTRIDGES, INK CARTRIDGES AND OTHER ACCESSORIES ARE STOCKED - PLEASE CALL FOR FURTHER DETAILS.

OLIVETTI PG306
 LASER PRINTER
£899 INCLUDES ON-SITE WARRANTY

PLOTTERS AND SCANNERS

HITACHI	681	A4/A3 PLOTTER	520
HITACHI	674	A4/A1 PLOTTER	2149*
(includes one year on-site warranty)			
PANASONIC	FX-RS505	SCANNER	919
(with I/F card, cables, IMAGE AND OCR software)			
NISCAN	HAND SCANNER		139
NISCAN	OCR software		189

DRIVES

CITIZEN	OSDD 05A-WD	3.5" 720K in 5.25" KIT	59
CITIZEN	OSDA 39C-WD	3.5" 1.44mb in 5.25" KIT	■
CITIZEN	OSD 76A-WD	3.5" 720K AMSTRAD KIT	■
INTERNAL	5.25" 1.2mb		59
INTERNAL	5.25" 360K		■
JAVELIN	HC20	20mb XT HARD CARD	185
JAVELIN	HC30	30mb XT HARD CARD	199
FILECARD	HC40	40mb AT HARD CARD	229
KYOCERA	KC 20B(s)	20mb XT/AT DRIVE, 3.5"	138
KYOCERA	KC 30B(s)	30mb XT/AT DRIVE, 3.5"	158
KYOCERA	FRAME	5.25" kit for 3.5" hard drives	5

DRIVE CONTROLLERS AVAILABLE - CALL FOR DETAILS.

CABLES AND ACCESSORIES

PRINTER CABLE	1.8 metre	8
PRINTER CABLE	3.0 metre	9
SERIAL CABLE	1.8 metre	10
T SWITCH	2 way serial	13
T SWITCH	2 way parallel	13
T SWITCH	2 way serial crossover	25
T SWITCH	2 way parallel crossover	25
BUFFER	64k in-line	79

ACORN A3000
 1mb RAM KIT
£89

COMPUTERS

ALL OUR COMPUTERS INCLUDE A MONITOR.

COMMODORE

ALL MODELS INCLUDE ONE YEAR ON-SITE MAINTENANCE

	MONO	CGA	VGA MONO	VGA COLOUR
	£	£	£	£
PC 10 SD	485	615	635	725
PC 10 DD	535	665	685	775
PC 20 HD20	675	795	845	945
PC 30 HD20			967	1128
PC 40 DH40			1229	1379

COMMODORE SPECIAL
 PC 10SD/10C 40MB DRIVE & MONITOR
 INCLUDES ON-SITE WARRANTY
 MONO CGA MONO COLOUR VGA
£699 £829 £849 £949

SAMSUNG

ALL MODELS INCLUDE ONE YEAR ON-SITE MAINTENANCE

	MONO	VGA MONO	VGA COLOUR
	£	£	£
SPC 3000 SD	483	589	789
SPC 3000 DD	569	659	859
SPC 3000 HD20	739	839	1039
SPC 6512 DD		919	1119
SPC 6512 DD HD40		1109	1309

HYUNDAI

	MONO	EGA	VGA MONO	VGA COLOUR
	£	£	£	£
16TE SD	419	699		
16TE DD	459	759		
16TE HD30	619	919		
286x SD			639	819
286x HD40			939	1119

HYUNDAI 16TE
£419 MONO XT AND MONITOR
HYUNDAI 286X SD
£1099 HD 40 AND VGA MONITOR

PORTABLES

SHARP	4602	DD	789
SHARP	5541	286 HD40	2099
SAMSUNG	S5200	286 HD32	1707*

(includes on-site maintenance)
NOW IN STOCK
SHARP 8041 & 8081 386 LAPTOPS - CALL FOR PRICES.

SHARP 5541
£2099 HD 40 286 LAPTOP

THIS IS ONLY A SMALL SELECTION OF THE PC'S THAT WE SELL - CALL FOR FURTHER DETAILS.

PHILIPS CM9053
EGA MONITOR
£249 INCLUDES ON-SITE WARRANTY

MONITORS

			Price £
MONO	HYUNDAI	HMM1200	12" 65
MONO	PHILIPS	BM 7513	12" ■
MONO	PHILIPS	BM 7913 FST	12" 80
MONO	SAMSUNG	MA 2671	12" 81
MONO VGA	PHILIPS	BM 7749 FST	12" 107
MONO VGA	SAMSUNG	ML 2611	12" 81
MONO VGA	SAMSUNG	ML 4571	12" 95
MONO A4	SAMSUNG	MP 5671	A4 634
(includes card and software)			
CGA	PHILIPS	CM 8833	14" 199
EGA	PHILIPS	CM 9053	14" 249
EGA	PHILIPS	CM 9073	14" 289
EGA	SAMSUNG	CM 4551	14" 281
VGA	PHILIPS	3CM 9809	14" 325
VGA	SAMSUNG	CJ 4581	14" 281
MULTISYNC	SAMSUNG	CT 4581	14" 340

ALL MONITORS INCLUDE ON-SITE WARRANTY EXCLUDING THE HYUNDAI HMM 1200.

MDA/CGA CARD with PRINTER PORT	45
MDA/CGA/EGA CARD	99
VGA CARD	129

UPGRADES AND ENHANCEMENTS

MDM2400 PC CARD MODEM
£135 INCLUDING SOFTWARE

AKHTER	MDM 2400 PC CARD MODEM	135
FAXTEL	FAX SWITCH (auto switches calls to fax or phone)	69
KEYBOARD 84	84 KEY UK LAYOUT XT	41
KEYBOARD 102	102 KEY UK LAYOUT XT/AT	■
RAM CARD	576K - XT	27
RAM CARD	2Mb - specify XT or AT	■
SERIAL MOUSE	includes DR Halo III software	38
MULTI I/O CARD	XT - RS232/printer/clock/games/floppy	54
I/O CARD	AT - RS232/Printer	54
I/O CARD	XT RS232	19
UPS	250W	199

MEMORY - call for prices of SIMM's, SIP's and DRAM's.

SUPERDEALS

SCHNEIDER	220 AT MONO PC SYSTEM	909
SCHNEIDER	20mb HARD DRIVE KIT	199
HYUNDAI	360K DISK DRIVE	45
YE DATA	720K DISK DRIVE	49
SHARP	JX 9300 LASER PRINTER	949
SHARP	JX 720 INK JET PRINTER	649
MICROVITEC	1431 DS4 - BBC MONITOR	169
MICROVITEC	1451 MS4 - BBC MONITOR (metal case)	229
MICROVITEC	1456 DL2 - NIMBUS MONITOR	249
MIRACOM	COURIER HST MODEM 9600/V22bis/V22/V21/V23 & MNP	539
IBM	MODEL 30-021	849
IBM	MODEL 50-061	1599

WE ARE AN ACORN EDUCATIONAL DEALER - CALL FOR PRICES.

Business Technology Centre

HOLE HOUSE FARM, BURNLEY RD, CLIVIGER, LANCS, BB11 3RF

Tel. & Fax: 0282 831900 (24 HOURS)



YOUR FORMAT

MACHINE SPECIFIC COLUMN

ST



'CAREWARE' IS HERE

Micro Care has announced the release of the first ever charity licenseware compilation, launched to assist Child Concern, which is based in Derby and threatened with closure through lack of funding.

Not only is it an exceptionally good cause, but the ST compilation is an excellent investment too, costing the ridiculously paltry sum of £2.99. This fee includes a 50p donation to Child Concern, which may not sound a large charity contribution, but it's over three times the usual royalty on a licenseware disk.

As well as being available from all good PD libraries at this price, the compilation is also on sale at the same price direct from Micro Care and Wombat PD library. Buy from these

sources and a whacking great £1.75 goes to Child Care, with the rest covering disk, duplication and mailing costs.

At this level of donation it's easy to see how, simply by availing yourself of this excellent opportunity, you can also do some good too. What are you waiting for? The address? Oops, nearly forgot!

Send your £2.99 (or more: I reckon a fiver would be in order) to: Paul Bocij, Micro Care, 19 Moore St, Normanton, Derby DE3 6SN, or Dave Burns, Wombat PD Library, 10 Tilly Close, Staddiscombe, Plymouth PL9 9DD. Tell 'em you heard about it in Express.

SADLY DECEASED

I've had a rather panic-stricken letter from one Mark Goodwin of Coldstream in Scotland, who's had trouble getting in touch with the Bath Computer Shack. That's hardly surprising, since it went into liquidation some time back.

If, like Mark, you have outstanding orders and have been expecting to hear from BCS, you need to call the official receiver Ernest and Young on 0272 290808. Speak to either C M Clapp or Andrew Sheridan about Chooseframe Motors Ltd, trading as Bath Computer Shack. Don't hold out too much hope, but it's got to be worth a try.

MOUSE GROUSE?

If you have never used any mouse but the one that came with your ST, you don't know what you're missing. Instead of the clumsy, ill-shaped device you drag wearily around your desktop, you could be whizzing about with a neat, lightweight device.

Such as? Such as the Logitech ST Pilot, which boasts such features as a self-cleaning ball-cage - try opening up your current mouse and look at the gunk accumulated there - and adjustable cursor sensitivity via a desk accessory. The price, £34, also includes three levels of that annoyingly-addictive game, *Pipe Mania*. Retire your current model and upgrade to an ST Pilot: ring 0753 37222.

ST SERVICE REPORT

A little while back, you may recall, I invited readers to submit reports on their experiences of mail order purchasing. One such has come from Jerome Pimmel, fortunate enough to reside in lovely St Peter Port on the isle of Guernsey (that's enough Holiday '90 - ed).

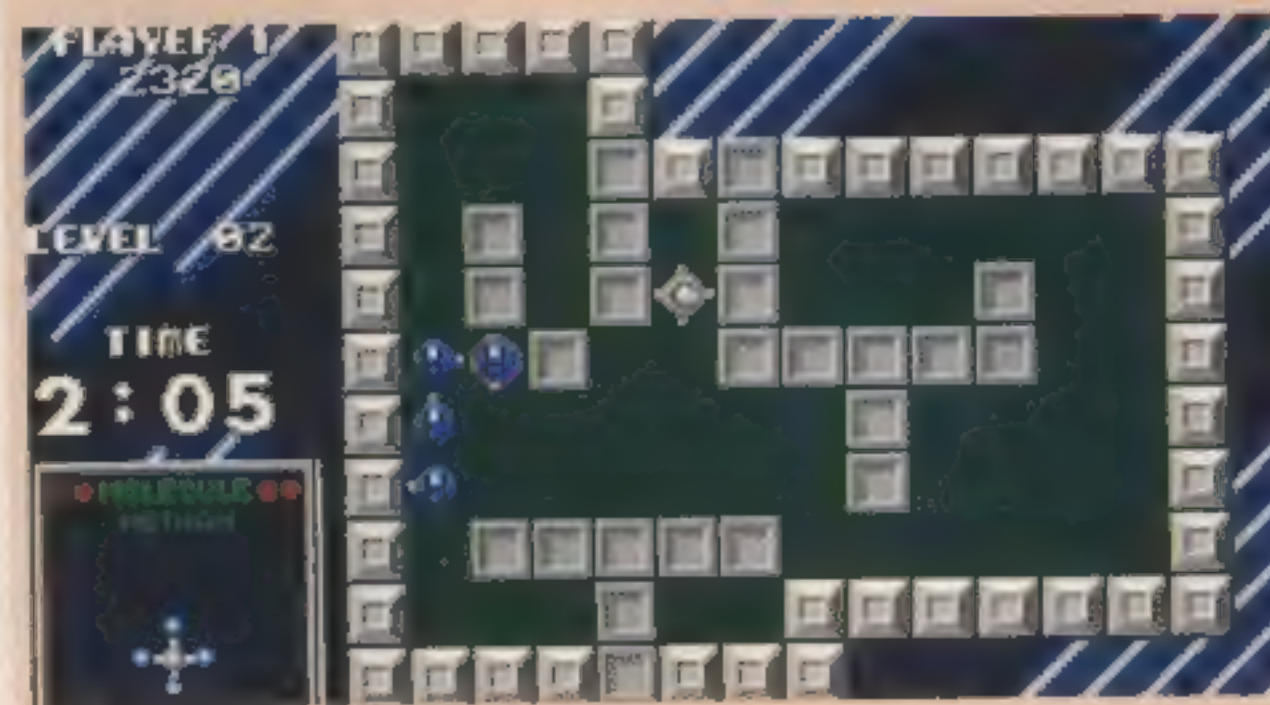
Jerome ordered the rather wonderful accessories suite *Harlekin* from Cambridge Business Software, and he received it within two days. He is also full of praise for Floppyshop ST for the prompt and courteous service he enjoyed.

Jerome was not so happy with another mail order company, but I shall refrain from

ATOMIX

ST GAME of the WEEK

Thalion/US Gold • £19.95



The last game to attempt to liven up chemistry by turning molecular structures into a challenging computer game was called *E-Motion*. *Atomix* treads much the same ground in *Thalion*, with the objective being to assemble atomic structures.

In each level, you're presented with the atomic structure which you need to recreate. Your job is then to pick up atoms in the level and move them around a maze of walls so that they come to rest in such a way as to form the structure shown.

It sounds simple, but you can't just pick up an atom and position it anywhere you like. To move the atom you select it by moving a joystick over the top of it and then clicking.

By moving up, down, left or right you indicate the direction that the atom is going to take. Once the atom starts moving, it shifts either vertically or horizontally and only comes to rest when it bumps into either a wall or another atom.

The puzzle element comes in arranging the atoms so that they come to rest in exactly the right position. This isn't easy because it means working out the best place to build your structure and the correct order in which to move the atoms.

All the levels have a time limit ranging from two minutes for easy levels up to four minutes for some of the near-impossible ones. Each time you see a new level you spend much of this time working out the best place to build your molecule. Although this means suffering defeat the first time you tackle it, at least you're prepared next time you reach the level.

In between every five levels there is a bonus challenge, where you need to move a set of tiles to form the pattern indicated. These tiles move in the same way as the atoms. If you complete the bonus levels you pick up extra points.

This is a wonderfully-addictive challenge which in many ways is more appealing than *E-Motion*. The puzzle element here is much more thought-provoking and you don't need to be a master of the joystick to win. *Atomix* is undoubtedly one of the most engrossing puzzle games to hit the ST in a long time. The only real criticism is that there aren't enough levels to satisfy the puzzle pro.

Mark Higham

mentioning its name until I've looked into the matter and given it the opportunity to explain itself.

If you've had exceptional service, exceptional either for its speed or its sloth, let me know: Service Report, Steve Carey, *New Computer Express*, 30 Monmouth Street, Bath BA1 2AP.

COREWARS

As well as the latest update to the excellent South West Software Library, Martyn Dryden has sent me *CoreWars* (disk 977) by Stephen Tavener.

You may already be familiar with this 'programmer's game,' based, I seem to recall, on A K Dewdney's *The Armchair Universe*. Two programs, operating concurrently in the same segment of memory, try to corrupt each other.

But this is truly an

exceptional implementation of it, being fully mouse driven and featuring an integrated editor and assembler. Up to five programs can run simultaneously and there is also a great Tournament facility. The battlefield sequence makes full use of the ST's colour graphics.

Try it for yourself for just £3 (including p&p) from The South West Software Library, PO Box 562, Wimborne, Dorset BH21 2YD.

It makes an excellent introduction to what Prince Charles (hope his arm is mending nicely) would undoubtedly call the 'whole thingie' of public domain software. If you haven't already linked up with one of the excellent PD libraries, check out the ads in this issue of *Express* and do so at once!

Steve Carey

FAIR REPORT

Greetings to those readers I bumped into - several of them literally! - at the recent 16 Bit Show, held at the Horticultural Halls. The show was exceptionally well attended, with more than 21,000 visitors flocking in their anoraks. I've passed on your comments about *Express* to the Editor. I can't promise that we will be going up to 300 pages and cutting the cover price, as one gentleman suggested, though.

Attracting a good deal of attention, and rightly so, was *Tower Power*, a recent import from Germany (where there are over 600,000 STs - over twice the number in the UK). Boss Karl Brandt was busy demonstrating this space-saving and peripheral-protecting tower case for the ST, which takes the innards of your ST off your desk, out of your way and safely on to the floor.

It's ideal if you use Spectre GCR, the ST Macintosh emulator, Hypercache, PC-Speed or any other hardware peripheral, for it means it can be neatly tucked inside the Tower and out of harm's way. Musicians on the road, whose STs tend to get very cluttered and fragile around the MIDI in and out ports, would surely benefit from having all that stuff gathered together and inserted into a Tower system.

Tower System 1 for the Mega costs £129.50 as a solder-free DIY kit, while *System 2* for the STFM and STE is £165: the difference in price is because the Mega keyboard, of course, already comes as a separate unit.

If you are, like me, nervous about the idea of pulling the guts out of your ST and attempting to re-assemble them in a brand new metal casing, the *Tower System* can be fitted for you at an extra £75. Alternatively you can order a brand new ST, in your own specification, set up in the appropriate Tower. Call Radio Service Company on 071-708 5755 for more details.

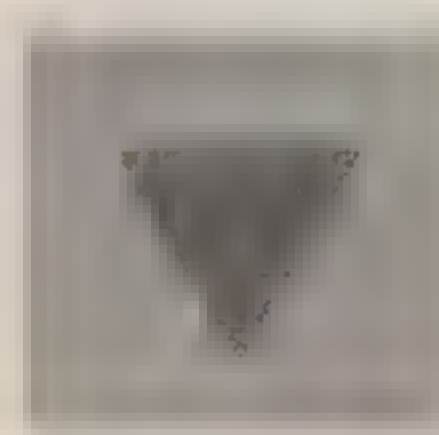
Other stalls well worth visiting included Condor, which was demonstrating version 1.4 of the £350 plug-in PC clone for the ST - *Supercharger*. New features include an option to connect several *Superchargers* together and a hot key, enabling TOS/DOS switching without rebooting, so you can leave your PC software up and running while you get back to your ST program. Ring the good folks at Condor on 0734 810066.

Also on view was *Take Control*, version 2, the £300 DTP package for music on the ST. It's claimed to be the only professional program of its kind for the ST, and it incorporates several new features, including real time MIDI input, playback of scores, graphics functions and automatic scoring. Call *Take Control* on 021-706 6085.

All in all a show that more than lived up to its title of 'Fair'.



• Tower System: feel the power.



PCB, HEAL THYSELF

One of the most interesting bits of news to come out of IBM this year details the results of research carried out by the company's TJ Watson Research Center in New York.

A newly-patented repair process developed at the lab automatically mends defects in the tracks laid onto printed circuit boards (PCBs). When the elements of a PCB are etched out of a copper-covered sheet of fibreglass, any narrowing of the tracks or open circuits can be very hard to discover and still harder to repair.

The new process, patented by C Julian Chen for IBM, involves putting a high current through the tracks on the board, while it's immersed in an electroplating solution.

Any narrowed track will grow hotter than any surrounding normal-width tracks, as resistance to the current will be higher at the narrowest point.

Metal is automatically plated on to the narrowed track after being eroded from other parts of the circuit. Because narrowed tracks or open circuits are a tiny fraction of the whole length of the track, the amount of erosion from the rest of the circuit is negligible.

The most innovative parts of the process are that it is self-locating, automatically finding the area of damage, and self-terminating. As the track widens to the same width as its surroundings, the resistance decreases and the temperature of the track drops.

IBM hopes the process will speed repair of damaged boards and lower the reject rate of new PCBs. It's one of those inventions that leaves you wondering why nobody thought of it sooner.

UPSETTING THE CART

If you have a LaserJet printer and find the price of HP font cartridges exorbitant, SuperFonts 25/1 should have you rubbing your hands

together. SuperFonts is a set of downloadable HP soft fonts directly compatible with the HP font cartridges, labelled from 'A' to 'Z'.

Quite why it's called in part 25/1 is hard to fathom, as there are only 23 cartridges in the set, with no I, O or S designations.

The soft fonts and the cartridge generator take up between three and four megabytes of hard disk space, but once the fonts have been created, you can delete the generator and recoup a staggering 2.5Mb.

Fonts can be handled in exactly the same way as cartridges, except that you type 'Insert' or 'Remove' from your keyboard, rather than inserting and removing physical cartridges from your laser printer.

Software that's geared to work with the HP fonts will be able to detect and print with the SuperFonts equivalents, and know no difference.

All this facility can also

save you a lot of money, though your laser printer must have enough memory to handle all the downloaded fonts.

The cartridge fonts are, of course, in ROM. SuperFonts costs £143.75, against around £100 for each HP font cartridge.

SuperFonts is from Metro Software, the US company that brought you LaserTwin, the HP emulator for dot-matrix and inkjet printers.

The fonts will work in conjunction with LaserTwin, so you can have the full compliment on your 24-pin as well. Metro Software is on 0491 579857 and Software Paradise, which supplied the package, is on 0222 887521.

GIUS A BREAK

I'm conscious of giving more space to the multi-nationals in this column than to the little companies, which often have the really innovative products.

The current round of computer shows lends credence to the idea that the small guy is

being squeezed out by the man with the muscle and the big PR budget.

There are fewer and fewer stands round the edges of these shows – the price of floorspace continues to increase, and if you're just starting out with a new product, it can be a big gamble to invest all in a few day's sales.

So, any small companies that have interesting new PC products, please use this column as a forum – at least an introductory one.

Send me details of your new hardware or software, or

better still, include a review sample and I will endeavour to bring it to a wider audience through generous coverage in Express.

Most items that come through on a week-by-week basis get some space in this column. Make part of that your very own.

Anyway, to reach me, you can write to the PC column, *New Computer Express* magazine, 30 Monmouth Street, Bath BA1 2AP. It will take about a week to be forwarded on, but do not despair!

Simon Williams

PORTABLE VICTOR

Portables continue to grow more compact, with decreases in hard disk size and smaller mother boards. The latest to arrive on my desk is the V86P, from Victor.

This slightly over A4-sized 8086-based laptop weighs in at a respectable 3.8kg and comes with a good complement of ports, a decent keyboard and a 'no-worse-than-average' supertwist LCD display.

There are two versions of the machine currently available; twin 3.5-inch floppies or a single floppy and a 20Mb hard disk.

The hard disk version of the machine has an automatic cut-out on the drive to save its battery, though the start up and close down noise is probably intrusive enough to get BR guards quoting the byelaws at you.



• The latest, and the quite good, laptop PC from Victor.

The access time for the drive is a slow 58ms, but is still a lot snappier than a twin floppy system.

The keyboard is compact, while keeping most keys in their proper places. The [Return] key is rather too small for comfort and it took a while to stop hitting [F] by mistake.

Otherwise, though, it's usable over prolonged periods. Behind the keyboard and under the hinge runs a row of LEDs showing disk usage, the various keyboard locks and low battery.

The battery pack, which is a long, thin cylinder sliding under a hatch along the back of the V86P, is claimed to last for around 2.5 hours. In fact the low battery LED started flashing on hard disk access after about an hour.

This flashing is in itself confusing. Do you start re-charging as soon as you see a flash or when the indicator stays lit permanently? Better to have a visual and audio warning as a once off when the voltage drops below a threshold for a pre-set time.

The display on the V86P is the usual dark blue on light green supertwist LCD, and as usual needs to be used in good light – daylight's best. This is ideal for working out in the garden, though you may need to position yourself carefully under artificial light to use the machine regularly indoors.

This is the same with most LCDs, of course, though a back-light would make a considerable difference. It would also be useful if the display could hinge back further to a flatter angle.

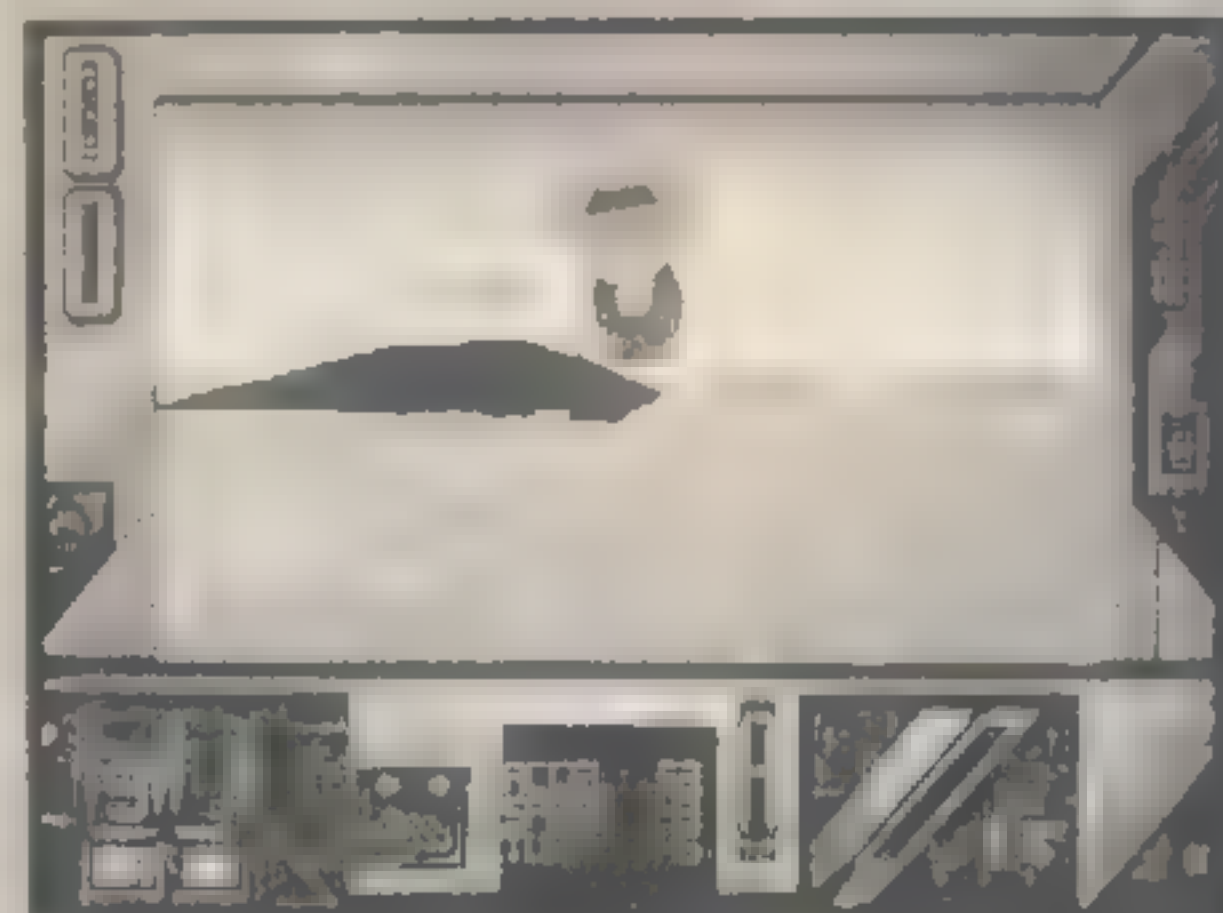
The V86P is a good, solid, base-level portable, attractively styled and with a smaller profile than many. It comes bundled with MS-DOS 4.01 and a decent padded carrying bag.

One of the nicest things about it, though, is its pricing. Following a recent price-cut, you can now get the twin floppy model for £805 and the hard disk machine for just under £1,150.

You may contact the good people at Victor for more details, on the following: 0494 461641.



Millenium • £29.99



• Thunderstrike: good name, good game.

In these days of strategy games, graphic adventures and flight simulators, it is easy to put down the standard shoot-'em-up as a puerile form of entertainment. Nevertheless, not much can beat a spot of mindless alien-bashing after a hard day's work.

Unfortunately, all too few actually combine the ingredients necessary for a really good example of the genre. It is of course important that it looks good on screen, but it's also important that the aliens gain intelligence by just the right degree with each successive wave, that your ship has the right characteristics and is easy to control, that the game gets harder each time, but not so hard that you give up.

Get the combination right, and you've got a winner addictive enough to keep you at it all night. Get it wrong, and you've got a waste of money. Thankfully Thunderstrike gets almost all the ingredients right.

First of all the graphics are superb, particularly on a VGA screen where the game makes full use of the 256-colour display mode to give a graduated blue sky, a subtle patchwork of green fields and enemies that positively pulsate. Everything is depicted in solid 3D, and movement is astonishingly fast.

The plot is fairly straightforward, designed to provide a wide range of enemy craft, a limited amount of tactical play, and 50 progressively harder levels. The game only falls down a little on control, as it does not support the IBM's joystick and is very sensitive when using a mouse.

Not as addictive as the superb Resolution 101, but a fine example of the genre nonetheless.

Matt Nicholson

SPECTRUM

BUILDING DOWNTOWN

Sim City from Infogrames is a 16-bit game that's had several hectares of glossy magazine print devoted to it while prompting whole office loads of computer journals to faint with excitement on loading.

The announcement of a Speccy version was greeted with the usual amounts of superior laughter, smugness and downright unkind comments about our computer's apparent inability to pull off a respectable version.

It looks like doubters are going to be proved wrong yet again when *Sim City* is released for the Speccy very soon indeed. Previews suggest an excellent conversion.

The idea behind *Sim City* is to design and run a city, imposing taxes, building things and generally trying to keep the inhabitants as happy as possible. Start saving money to the measure of £9.99 – and keep an eye out for the definitive review in *Your Sinclair*.

THE BEST OF PD

Graham Mills of Perth wants some info regarding the purveyors of that all round good thing, public domain software. Surprisingly, Speccy PD has only been widely available in the last year or so but already there are a few suppliers with shelves healthily stacked with the stuff.

Graham told me he was most interested in Plus 3PD – so the best place to direct him most certainly is the Plus 3 User Groups PD library, which I'm pretty sure is also open to non-members.

I've just seen the latest list of Speccy PD, and it numbers a pretty impressive 96 programs, not including eight volumes of C/PM software for owners of Mallard's Plus 3 C/PM package and loads of finest quality foreign PD that's been uncovered by head librarian Gary Stimson.

Prices are reasonable, and the programs range from Amiga-style demos like *SpecTec* to more boring, but no doubt useful, Comms utilities. Anyone who wants to see what's on offer should send an SAE to 4 Fox Covert Drive, Roade, Northants NN7 2LL.

Additionally, if you don't own a Plus 3 – or come to think of it even if you do – the Speccy Sector PD library is well worth contacting. I haven't seen an update for a while, but at last glance organiser Owen Brown was offering loads of Speccy PD on tape or disk at next-to-nothing cost. Further details with an SAE to 1 Roxwell Road, Chelmsford, Essex CM1 2LY.

Last source of PD worth mentioning is the consistently excellent electronic magazine *Outlet* (605 Loughborough Road, Birstall, Leicester LE4 4NJ). Every month this offers a great mix of articles, tips, news and several very high quality pieces of software placed in the public domain. Read the review of the latest few issues next column or obtain more details by performing the traditional SAE sending custom.

IT'S ENIGMATIC

The latest issue of the *Enigma* tapezine is out now and it provides another dose of fun for all Speccy-owning families. As well as the usual mix of news, reviews and chat there are comprehensive columns dealing with adventures and programming and everything's excellently presented with a host of special FXs and an accompanying soundtrack.

There's even more in this issue, including *Plus D Hacker* by Steve Nutting and the first part of *Dr Jekyll and Mr Hyde*. Indeed, there is something for everyone if ever I saw it, and the issue is well worth the £1.99 asking price from ESD, 15 Westfield Road, Inverurie, Aberdeenshire AB5 9YR.

Robin Alway

PCW

SOCCER SPECIAL

As Garth Crooks once said, football's football: if it wasn't, it wouldn't be the game that it is.

No such gems of Colemanballs from the last World Cup, though John Motson must have come close with this one: "If the teams in England's group finish level on points, then positions will be decided on goal difference," he said. "Especially if all the games are drawn."

Anyway, maybe prompted by the sounds of Luciano Pavarotti singing *Nesun' Dorma*, Mark Wright (no relation, surely?) of Bristol asks if there are any football programs for the PCW.

Yes there are, Mark. The excellent *Match Day II* is sort of computerised Subbuteo game where you control players on screen against the computer. The game costs £14.95, and the graphics are astonishing for the PCW (but don't compare with, say, an ST or Amiga). Try your local software shop or Ocean on 061-832 6633.

Alternatively you can try a football management simulation such as *World of Soccer* from Coda (£15.95 on 081-789 9551). This is a text-only game in which you select (real) players for England; the PCW 'plays' matches, gives you a commentary on each match and tells you what's happening injury-wise after each game. You can see how you fare in the European or World Cup.

FAX AT YOUR FINGERTIPS

The Amstrad FX9600T fax machine is now out, boasting compatibility with your home computer (ie your PCW).

As well as the normal fax functions you can hook up your PCW to it and fax a text document without putting it to paper first. Handy, but not a great money-saver: there's no corresponding paperless receive-text-to-disk function that would save you loads on fax paper.

The FX9600T is well-priced for a fax at £689, but the PCW compatibility is not worth worrying about to be honest.

BY THE BOOK

At last a new book for users of *LocoScript 2's* add-ons *LocoFile*, *LocoFont*, *LocoSpell* and *LocoMail*.

Ian Sinclair's book *LocoScript 2 with LocoMail, LocoSpell and LocoFile* costs £10.95. The sections for the add-ons are a bit too thin, and much of the book is about the word processor; these oversights are a shame.

The book does represent reasonable value though. If your local bookshop doesn't have it in stock, you can find it by the ISBN number, which is as follows: 0 632 02861 0.

Rob Ainsley

GOING GREEN

Fed up with not being able to read your *LocoScript* screen on these bright summer days?

Owners of *Flipper* can use it to reverse the screen out, black-on-green. Set *Flipper* up with CP/M in one half and *LocoScript* in the other. In the CP/M half insert your CP/M disk and type **PALETTE 1,0 [RETURN]** then flip to *LocoScript*. The command to restore normal colours is **PALETTE 6,1**.

MSX

REDUCED!

When things are quiet – as they are in the computing world at present – bargains can be had for the asking.

For example, K-Soft Computers of Retford has decided to compete in the budget-priced section of the games market with many titles now on offer for the sum of £2.99, and with multi-game tapes at only £5.95.

For the adventure freaks, several titles of this type are now only £3.99, including *The Crypt*, *Mystery Mansion*, and *Battlestar*. Furthermore, *Division One* – the football management simulation – is now only £2.99.

You might remember that I reviewed this latter game, saying that it needed to be reduced in price if it were to compete with the likes of *Football Manager*. Obviously someone reads my column and takes note of my opinions.

For a copy of the latest price list send an SAE to K-Soft Computers at the following address: 1 Stanley Street, Retford, Notts DN22 7AE.

UPGRADE PARADE

Owning an MSX 2 computer, means not only that you have a computer with great graphics upon which you can play brilliant games, but the 80-column display allows you to run programs that the MSX 1 computer cannot handle.

Probably the biggest bonus is that you can run CP/M version 3 just as you can on the Amstrad PCW. Of course running CP/M is also possible with the Spectravideo computers that have an 80-column adapter.

I have no idea if anyone has actually used software designed for PCW computers (running under CP/M) on an MSX 2 – if you know if this has been achieved please let me know.

I do know that one stumbling block to this MSX/PCW compatibility is the strange format that Amstrad in its infinite wisdom chose to use – namely the 3-inch disk.

This should not be too much of a problem though, as quite a few public domain libraries have a disk format translation service, and it should not be too difficult to convert a 3-inch to a 3.5-inch disk.

For those who wish to try CP/M on their machines, you need the operating system on disk, and, of course, at least one drive – preferably two.

You can obtain a copy of CP/M from the MSX software library, 396 Park Lane Maghull, Merseyside. If this doesn't pan out, it may mean a trip to Holland – not many pockets will run to that expense, however.

I can recommend a couple of books on CP/M: *The Software Bus*, published by Sigma Technical Press, and *The CP/M Plus Handbook*, by Digital Research and Amstrad Consumer Electronics PLC.

As I delve further into the subject of CP/M, which I must admit is fairly new to me, I will then pass on this knowledge in future articles.

A quick PS to this subject, does any MSX user know if the Spectravideo 80-column adapter is usable on the MSX 1? If so, I would like very, very much to hear from you.

Keith Neal

SAM COUPE

HOW TO DO IT

Here's a truly excellent tip for anyone who's grown bored and disillusioned with the standard, plain vanilla Coupé system font. A genius called Ryan Gilmour has worked out how to re-design it.

Huge thanks and a more substantial reward in the form of a scintillating, free piece of SAM software is on it's way to him.

Here's what you have to do. First design your font in Flash's excellent font designer, and then save the file to tape or disk, using a sensible file name like 'Bold Font' or 'Small Font', etc, so that you can retrieve it later on.

Then you must exit to BASIC and 'Load' font's code into memory using **LOAD "FONT NAME" CODE 16385** (or for more advanced users, wherever in memory that you wish), where **FONT NAME** is the appropriate name of your font. Don't despair, you will not notice any difference to the system font yet.

Type the following two Pokes:

POKE 565,144 (or 145, if you prefer)

Now, if all went well, the system font will have changed to whatever font style you have designed. If at any time you wish to swap back to the system font then type the following two Pokes:

POKE 565,144

POKE 565,80

Also, you lucky disk drive owners could place the following few lines of code into your 'Auto' program to automatically change the system font:

```
10 REM Auto Program
20 LOAD "FONT NAME" CODE 16385
30 POKE 565,1
40 POKE 565,63
50 REM Remainder of Auto Program
```

Brilliant. Thanks Ryan. If anyone's got any other tips, pokes or roubles for the Coupé send them to me at the usual Express address. Eternal gratitude and a free piece of SAM software could be yours.

Robin Alway

CPC

EASY PC

How many times have you wanted to transfer text files, say, from your CPC to a PC, or vice versa?

There must be many people who work on PCs in the office, for example, but have CPCs at home. Or maybe you've just written a best-selling novel on your CPC, but your publisher wants it on a 3.5-inch PC disk?

Traditionally, the only way to transfer files from one machine to the other has been by serial link. For this you need a number of things. Firstly, your CPC will need a serial interface. Secondly, you'll need a serial lead. Thirdly, you'll need comms software for both the CPC and PC - and probably the best part of a weekend to work out the comms protocols! And finally, the two machines will have to be side-by-side to connect them up.

That last point sounds about the most obvious, but it's certainly the greatest inconvenience, especially if you really do use a PC at work and a CPC at home.

You either have to lug one or other machine to the car/bus/train and probably do yourself a mischief in the pro-

cess, or, on the other hand, you could get a serial link a dozen miles long...

However, all these troubles could be at an end, thanks to a sudden surge of interest in file transfer programs. Basically, with the right software, a plug-in 3.5-inch second drive for your CPC can be made to write to and read from PC disks.

One such program comes on Romantic Robot's £9.95 RODOS Extra disk. RODOS is a replacement disk operating system which makes proper use of the full 800K capacity of 3.5-inch disks, and costs £29.95.

You'll need such an operating system anyway if you buy a second drive - and you will often find that RODOS comes free with your external drive. RODOS Extra is a batch of additional utilities which include a CPC-PC-CPC file transfer program. The good news is that the disk is only a tenner; the bad news is that it transfers files very slowly. Romantic Robot can be reached on 081-200 8870.

The newest file transfer utility on the market comes from Siren Software (061-228 1831), one of the leading suppliers of second drives. PC-Trans

costs £24.95 and is much faster than RODOS Extra when writing to PC disks. However, it's almost as slow when reading from them, and you do have to use disks formatted by PC-Trans itself.

Disks formatted on a PC are no good, and if you try to write to a PC-Trans disk with a PC, you'll just get corrupted files.

Best of all, though, is Multi File Utility, a program first sold by Moonstone years ago but since dropped. The CPC user group WACCI has dug it out and dusted it off, however, and the group is now offering it for sale again.

Price has yet to be finalised, but looks like it might be around £30. You can always give WACCI a call to check - the number is 081-898 1090.

MFU is fastest of all, taking just two minutes to transfer a full CPC disk to PC disk, and will carry out numerous other transfers as well, being designed originally to port CP/M programs from all sorts of weird and wonderful formats onto CPC disks.

All three of these programs will do the business, but with varying degrees of efficiency. You have to remember though that the CPC and PC are still completely incompatible. Only ASCII text and data files can be transferred successfully - programs and applications won't.

DEATH CONVOY!

Anyone who managed to finish off the opposition in Titus's *Fire & Forget* should just about have got his or her breath back by now. Which is just as well, because *Fire & Forget II: The Death Convoy* is on its way....

This time, a terrorist convoy is threatening the world with nuclear annihilation. It's your job to take to the road - and the air - to pursue the terrorists, destroying all the varied enemies in your path as you work your way towards the front of the convoy and the final battle.

As with *Fire & Forget*, you control a car which can also take to the air as it slugs it out with the bad guys. Titus is promising superb animation and fast 3D action as you battle 60 different enemies, collecting weapons, ammunition and fuel along the way. We wait with bated breath...

PLAYTIME

I've just received news of a new, independent educational software house appearing on the scene. Exeter-based TECS (Top-notch Educational Computer Software) is run by Darren J Davies, whose first product is *Playtime*. The Amstrad version will be out shortly and will, he says, feature the large, 16-colour graphics, sound and synthesised speech of the already available Atari ST version. The price will be £8.99.

TECS also plans to offer a programming service to schools and local authorities, and is particularly interested in developing hardware/software for the disabled.

You can find out more by writing to TECS at 45 Wear Barton Road, Countess Wear, Exeter, Devon EX2 7EH, or phoning 0392 875409.

Rod Lawton

TENNIS ANYONE?

Well, we're bang in the middle of Wimbledon again, and that fact has not escaped the software houses. Those that aren't currently devoting all their efforts to yet another World Cup footie outing are launching a game to add to the crop of tennis sims.

International 3D Tennis from Palace, however, is not your average joystick-wagging sports sim. It's a brave attempt to produce a genuine, 3D tennis sim, like *Driller* with balls... er, as it were.

The players are not represented by sprites at all, but by some rather oddly-proportioned wire-frame graphics.

And the courts are minimalist to the extreme. There's no real detail, just blocks of colour - and you see why when you start playing. The programmers haven't cheated at all. Everything really does move in 3D. You can even watch the on-court action from different viewpoints in the stands!

Gameplay-wise the graphics pose a difficulty. The transparent stick-men players lurch around the court like something out of a horror movie, making the game difficult to follow, while seeming as if it might have been written 10 years ago.

Play for a while longer, though, and you soon work out that *International 3D Tennis* really is very good indeed. For a start, there are four skill levels, ranging from Amateur, which any fool can manage, to Tennis Ace, which would give that old automaton the real world, horrible Ivan Lendl himself, a hard time.

For £9.99 on cassette, £14.99 on disk, you'll get a tennis sim which will make your friends hoot with laughter the first time they see it, but which you'll still be playing long after their favourites have been consigned to the bin.

International 3D Tennis is worth a look.



• International 3D Tennis looks a tad strange, but it's a corker.

YOUR FORMAT

MACHINE SPECIFIC COLUMN

AMIGA

8



Takekari: Amiga-based rip to Vietnam

ST

10



Chemistry: set piece on test

PC

11

Spectrum

12

SAM Coupe

12

PCW

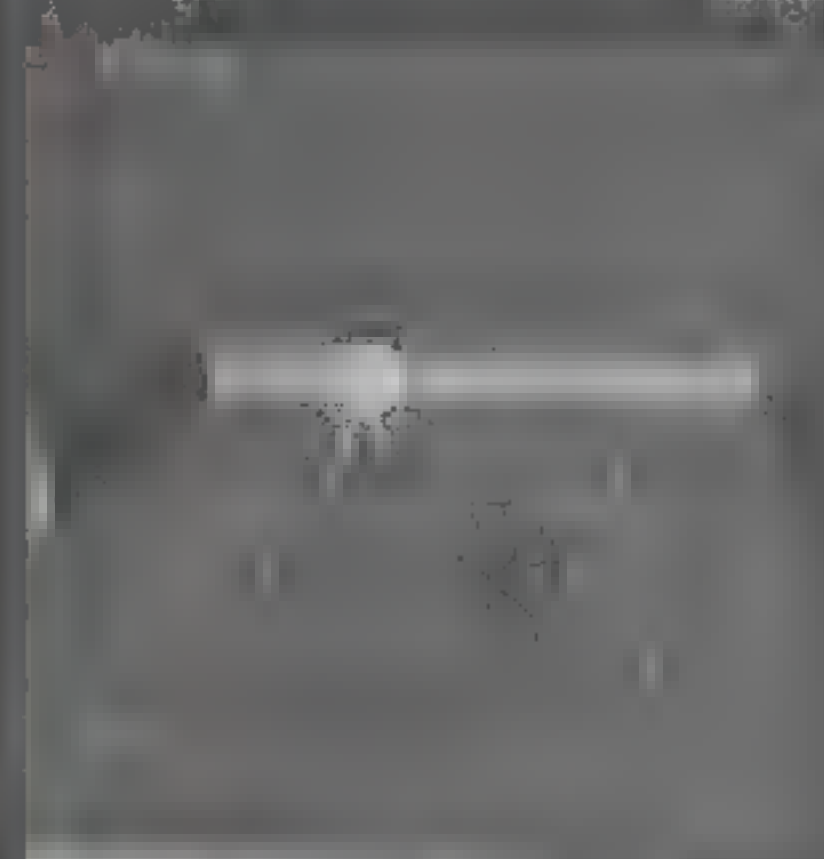
12

MSX

12

CPC

13



Playtime: those stick men can wheel

QL

14

BBC

14

Archimedes

14

C64

11

C64

POKE A POKE POKE

I can't find any POKES for the International Soccer cartridge of great age and fame. Still, there are a few more to choose from, so we'll start the week with *Bionic Commando*, and tell you that when a man appears you can stop the timer by pressing 'Shiftlock' and 'I'.

Another POKE-less tip is for *Parallax*, where the five passwords are 'Stack, Jewel, Parch, Salon and Globe'. As the next one requires lots of POKES I will leave you for this week with *Operation Wolf* and the news that POKE 16007,

165 gives you infinite energy, POKE 16113, 165 gives you infinite bullets, POKE 16117, 165 gives you infinite cartridges, POKE 16121, 165 gives you infinite bombs and POKE 16040 starts it off again.

CHEAPO SOFTWARE

Hidden among the pages of *Crystal News*, the fanzine produced by Crystal Unicorn, I have found software bargains.

As well as a cheap 'game of the month' and a demo disk containing the best of the month's demos and utilities, a flick of the page reveals such items as... but why should I tell you? Write to Adam Whittle at Redways, Harps Hall Road, Walton Highway, West Walton, Wisbech, Cambs PE14 7BJ - with SAE.

Pete Gerrard

PASS ME THE MENU

Whenever I see a program listing containing masses of 'ifs' and 'thens' I always want to alter it and make it take up less memory. A common culprit seems to be the program that operates from a menu system.

If you have seven items to choose from (for example) and seven 'If...Then' statements to sort out, you should know that you can accomplish your desired effect in less cumbersome ways.

Suppose the menu options require the user to press one of the keys 'QWERTYU'. The following lines of code will do nicely.

```
100 MNS="QWERTYU": A=0: B=LEN(MNS)
110 GET AS: IF AS=" " THEN 110
120 A=A+1: IF MID$(MNS,A,1)=AS THEN ON A GOTO
```

200, 300, 400, 500, 600, 700, 800, 900, 1000, 1100, 1200, 1300, 1400, 1500, 1600, 1700, 1800, 1900, 2000, 2100, 2200, 2300, 2400, 2500, 2600, 2700, 2800, 2900, 3000, 3100, 3200, 3300, 3400, 3500, 3600, 3700, 3800, 3900, 4000, 4100, 4200, 4300, 4400, 4500, 4600, 4700, 4800, 4900, 5000, 5100, 5200, 5300, 5400, 5500, 5600, 5700, 5800, 5900, 6000, 6100, 6200, 6300, 6400, 6500, 6600, 6700, 6800, 6900, 7000, 7100, 7200, 7300, 7400, 7500, 7600, 7700, 7800, 7900, 8000, 8100, 8200, 8300, 8400, 8500, 8600, 8700, 8800, 8900, 9000, 9100, 9200, 9300, 9400, 9500, 9600, 9700, 9800, 9900, 10000, 10100, 10200, 10300, 10400, 10500, 10600, 10700, 10800, 10900, 11000, 11100, 11200, 11300, 11400, 11500, 11600, 11700, 11800, 11900, 12000, 12100, 12200, 12300, 12400, 12500, 12600, 12700, 12800, 12900, 13000, 13100, 13200, 13300, 13400, 13500, 13600, 13700, 13800, 13900, 14000, 14100, 14200, 14300, 14400, 14500, 14600, 14700, 14800, 14900, 15000, 15100, 15200, 15300, 15400, 15500, 15600, 15700, 15800, 15900, 16000, 16100, 16200, 16300, 16400, 16500, 16600, 16700, 16800, 16900, 17000, 17100, 17200, 17300, 17400, 17500, 17600, 17700, 17800, 17900, 18000, 18100, 18200, 18300, 18400, 18500, 18600, 18700, 18800, 18900, 19000, 19100, 19200, 19300, 19400, 19500, 19600, 19700, 19800, 19900, 20000, 20100, 20200, 20300, 20400, 20500, 20600, 20700, 20800, 20900, 21000, 21100, 21200, 21300, 21400, 21500, 21600, 21700, 21800, 21900, 22000, 22100, 22200, 22300, 22400, 22500, 22600, 22700, 22800, 22900, 23000, 23100, 23200, 23300, 23400, 23500, 23600, 23700, 23800, 23900, 24000, 24100, 24200, 24300, 24400, 24500, 24600, 24700, 24800, 24900, 25000, 25100, 25200, 25300, 25400, 25500, 25600, 25700, 25800, 25900, 26000, 26100, 26200, 26300, 26400, 26500, 26600, 26700, 26800, 26900, 27000, 27100, 27200, 27300, 27400, 27500, 27600, 27700, 27800, 27900, 28000, 28100, 28200, 28300, 28400, 28500, 28600, 28700, 28800, 28900, 29000, 29100, 29200, 29300, 29400, 29500, 29600, 29700, 29800, 29900, 30000, 30100, 30200, 30300, 30400, 30500, 30600, 30700, 30800, 30900, 31000, 31100, 31200, 31300, 31400, 31500, 31600, 31700, 31800, 31900, 32000, 32100, 32200, 32300, 32400, 32500, 32600, 32700, 32800, 32900, 33000, 33100, 33200, 33300, 33400, 33500, 33600, 33700, 33800, 33900, 34000, 34100, 34200, 34300, 34400, 34500, 34600, 34700, 34800, 34900, 35000, 35100, 35200, 35300, 35400, 35500, 35600, 35700, 35800, 35900, 36000, 36100, 36200, 36300, 36400, 36500, 36600, 36700, 36800, 36900, 37000, 37100, 37200, 37300, 37400, 37500, 37600, 37700, 37800, 37900, 38000, 38100, 38200, 38300, 38400, 38500, 38600, 38700, 38800, 38900, 39000, 39100, 39200, 39300, 39400, 39500, 39600, 39700, 39800, 39900, 40000, 40100, 40200, 40300, 40400, 40500, 40600, 40700, 40800, 40900, 41000, 41100, 41200, 41300, 41400, 41500, 41600, 41700, 41800, 41900, 42000, 42100, 42200, 42300, 42400, 42500, 42600, 42700, 42800, 42900, 43000, 43100, 43200, 43300, 43400, 43500, 43600, 43700, 43800, 43900, 44000, 44100, 44200, 44300, 44400, 44500, 44600, 44700, 44800, 44900, 45000, 45100, 45200, 45300, 45400, 45500, 45600, 45700, 45800, 45900, 46000, 46100, 46200, 46300, 46400, 46500, 46600, 46700, 46800, 46900, 47000, 47100, 47200, 47300, 47400, 47500, 47600, 47700, 47800, 47900, 48000, 48100, 48200, 48300, 48400, 48500, 48600, 48700, 48800, 48900, 49000, 49100, 49200, 49300, 49400, 49500, 49600, 49700, 49800, 49900, 50000, 50100, 50200, 50300, 50400, 50500, 50600, 50700, 50800, 50900, 51000, 51100, 51200, 51300, 51400, 51500, 51600, 51700, 51800, 51900, 52000, 52100, 52200, 52300, 52400, 52500, 52600, 52700, 52800, 52900, 53000, 53100, 53200, 53300, 53400, 53500, 53600, 53700, 53800, 53900, 54000, 54100, 54200, 54300, 54400, 54500, 54600, 54700, 54800, 54900, 55000, 55100, 55200, 55300, 55400, 55500, 55600, 55700, 55800, 55900, 56000, 56100, 56200, 56300, 56400, 56500, 56600, 56700, 56800, 56900, 57000, 57100, 57200, 57300, 57400, 57500, 57600, 57700, 57800, 57900, 58000, 58100, 58200, 58300, 58400, 58500, 58600, 58700, 58800, 58900, 59000, 59100, 59200, 59300, 59400, 59500, 59600, 59700, 59800, 59900, 60000, 60100, 60200, 60300, 60400, 60500, 60600, 60700, 60800, 60900, 61000, 61100, 61200, 61300, 61400, 61500, 61600, 61700, 61800, 61900, 62000, 62100, 62200, 62300, 62400, 62500, 62600, 62700, 62800, 62900, 63000, 63100, 63200, 63300, 63400, 63500, 63600, 63700, 63800, 63900, 64000, 64100, 64200, 64300, 64400, 64500, 64600, 64700, 64800, 64900, 65000, 65100, 65200, 65300, 65400, 65500, 65600, 65700, 65800, 65900, 66000, 66100, 66200, 66300, 66400, 66500, 66600, 66700, 66800, 66900, 67000, 67100, 67200, 67300, 67400, 67500, 67600, 67700, 67800, 67900, 68000, 68100, 68200, 68300, 68400, 68500, 68600, 68700, 68800, 68900, 69000, 69100, 69200, 69300, 69400, 69500, 69600, 69700, 69800, 69900, 70000, 70100, 70200, 70300, 70400, 70500, 70600, 70700, 70800, 70900, 71000, 71100, 71200, 71300, 71400, 71500, 71600, 71700, 71800, 71900, 72000, 72100, 72200, 72300, 72400, 72500, 72600, 72700, 72800, 72900, 73000, 73100, 73200, 73300, 73400, 73500, 73600, 73700, 73800, 73900, 74000, 74100, 74200, 74300, 74400, 74500, 74600, 74700, 74800, 74900, 75000, 75100, 75200, 75300, 75400, 75500, 75600, 75700, 75800, 75900, 76000, 76100, 76200, 76300, 76400, 76500, 76600, 76700, 76800, 76900, 77000, 77100, 77200, 77300, 77400, 77500, 77600, 77700, 77800, 77900, 78000, 78100, 78200, 78300, 78400, 78500, 78600, 78700, 78800, 78900, 79000, 79100, 79200, 79300, 79400, 79500, 79600, 79700, 79800, 79900, 80000, 80100, 80200, 80300, 80400, 80500, 80600, 80700, 80800, 80900, 81000, 81100, 81200, 81300, 81400, 81500, 81600, 81700, 81800, 81900, 82000, 82100, 82200, 82300, 82400, 82500, 82600, 82700, 82800, 82900, 83000, 83100, 83200, 83300, 83400, 83500, 83600, 83700, 83800, 83900, 84000, 84100, 84200, 84300, 84400, 84500, 84600, 84700, 84800, 84900, 85000, 85100, 85200, 85300, 85400, 85500, 85600, 85700, 85800, 85900, 86000, 86100, 86200, 86300, 86400, 86500, 86600, 86700, 86800, 86900, 87000, 87100, 87200, 87300, 87400, 87500, 87600, 87700, 87800, 87900, 88000, 88100, 88200, 88300, 88400, 88500, 88600, 88700, 88800, 88900, 89000, 89100, 89200, 89300, 89400, 89500, 89600, 89700, 89800, 89900, 90000, 90100, 90200, 90300, 90400, 90500, 90600, 90700, 90800, 90900, 91000, 91100, 91200, 91300, 91400, 91500, 91600, 91700, 91800, 91900, 92000, 92100, 92200, 92300, 92400, 92500, 92600, 92700, 92800, 92900, 93000, 93100, 93200, 93300, 93400, 93500, 93600, 93700, 93800, 93900, 94000, 94100, 94200, 94300, 94400, 94500, 94600, 94700, 94800, 94900, 95000, 95100, 95200, 95300, 95400, 95500, 95600, 95700, 95800, 95900, 96000, 96100, 96200, 96300, 96400, 96500, 96600, 96700, 96800, 96900, 97000, 97100, 97200, 97300, 97400, 97500, 97600, 97700, 97800, 97900, 98000, 98100, 98200, 98300, 98400, 98500, 98600, 98700, 98800, 98900, 99000, 99100, 99200, 99300, 99400, 99500, 99600, 99700, 99800, 99900, 100000, 100100, 100200, 100300, 100400, 100500, 100600, 100700, 100800, 100900, 101000, 101100, 101200, 101300, 101400, 101500, 101600, 101700, 101800, 101900, 102000, 102100, 102200, 102300, 102400, 102500, 102600, 102700, 102800, 102900, 103000, 103100, 103200, 103300, 103400, 103500, 103600, 103700, 103800, 103900, 104000, 104100, 104200, 104300, 104400, 104500, 104600, 104700, 104800, 104900, 105000, 105100, 105200, 105300, 105400, 105500, 105600, 105700, 105800, 105900, 106000, 106100, 106200, 106300, 106400, 106500, 106600, 106700, 106800, 106900, 107000, 107100, 107200, 107300, 107400, 107500, 107600, 107700, 107800, 107900, 108000, 108100, 108200, 108300, 108400, 108500, 108600, 108700, 108800, 108900, 109000, 109100, 109200, 109300, 109400, 109500, 109600, 109700, 109800, 109900, 110000, 110100, 110200, 110300, 110400, 110500, 110600, 110700, 110800, 110900, 111000, 111100, 111200, 111300, 111400, 111500, 111600, 111700, 111800, 111900, 112000, 112100, 112200, 112300, 112400, 112500, 112600, 112700, 112800, 112900, 113000, 113100, 113200, 113300, 113400, 113500, 113600, 113700, 113800, 113900, 114000, 114100, 114200, 114300, 114400, 114500, 114600, 114700, 114800, 114900, 115000, 115100, 115200, 115300, 115400, 115500, 115600, 115700, 115800, 115900, 116000, 116100, 116200, 116300, 116400, 116500, 116600, 116700, 116800, 116900, 117000, 117100, 117200, 117300, 117400, 117500, 117600, 117700, 117800, 117900, 118000, 118100, 118200, 118300, 118400, 118500, 118600, 118700, 118800, 118900, 119000, 119100, 119200, 119300, 119400, 119500, 119600, 119700, 119800, 119900, 120000, 120100, 120200, 120300, 120400, 120500, 120600, 120700, 120800, 120900, 121000, 121100, 121200, 121300, 121400, 121500, 121600, 121700, 121800, 121900, 122000, 122100, 122200, 122300, 122400, 122500, 122600, 122700, 122800, 122900, 123000, 123100, 123200, 123300, 123400, 123500, 123600, 123700, 123800, 123900, 124000, 124100, 124200, 124300, 124400, 124500, 124600, 124700, 124800, 124900, 125000, 125100, 125200, 125300, 125400, 125500, 125600, 125700, 125800, 125900, 126000, 126100, 126200, 126300, 126400, 126500, 126600, 126700, 126800, 126900, 127000, 127100, 127200, 127300, 127400, 127500, 127600, 127700, 127800, 127900, 128000, 128100, 128200, 128300, 128400, 128500, 128600, 128700, 128800, 128900, 129000, 129100, 129200, 129300, 129400, 129500, 129600, 129700, 129800, 129900, 130000, 130100, 130200, 130300, 130400, 130500, 130600, 130700, 130800, 130900, 131000, 131100, 131200, 131300, 131400, 131500, 131600, 131700, 131800, 131900, 132000, 132100, 132200, 132300, 132400, 132500, 132600, 132700, 132800, 132900, 133000, 133100, 133200, 133300, 133400, 133500, 133600, 133700, 133800, 133900, 134000, 134100, 134200, 134300, 134400, 134500, 134600, 134700, 134800, 134900, 135000, 135100, 135200, 135300, 135400, 135500, 135600, 135700, 135800, 135900, 136000, 136100, 136200, 136300, 136400, 136500, 136600, 136700, 136800, 136900, 137000, 137100, 137200, 137300, 137400, 137500, 137600, 137700, 137800, 137900, 138000, 138100, 138200, 138300, 138400, 138500, 138600, 138700, 138800, 138900, 139000, 139100, 139200, 139300, 139400, 139500, 139600, 139700, 139800, 139900, 140000, 140100, 140200, 140300, 140400, 140500, 140600, 140700, 140800, 140900, 141000, 141100, 141200, 141300, 141400, 141500, 141600, 141700, 141800, 141900, 142000, 142100, 142200, 142300, 142400, 142500, 142600, 142700, 142800, 142900, 143000, 143100, 143200, 143300, 143400, 143500, 143600, 143700, 143800, 143900, 144000, 144100, 144200, 144300, 144400, 144500, 144600, 144700, 144800, 144900, 145000, 145100, 145200, 145300, 145400, 145500, 145600, 145700, 145800, 145900, 146000, 146100, 146200, 146300, 146400, 146500, 146600, 146700, 146800, 146900, 147000, 147100, 147200, 147300, 147400, 147500, 147600, 147700, 147800, 147900, 148000, 148100, 148200, 148300, 148400, 148500, 148600, 148700, 148800, 148900, 149000, 149100, 149200, 149300, 149400, 149500, 149600, 149700, 149800, 149900, 150000, 150100, 150200, 150300, 150400, 150500, 150600, 150700, 150800, 150900, 151000, 151100, 151200, 151300, 151400, 151500, 151600, 151700, 151800, 151900, 152000, 152100, 152200, 152300, 152400, 152500, 152600, 152700, 152800, 152900, 153000, 153100, 153200, 153300, 153400, 153500, 153600, 153700, 153800, 153900, 154000, 154100, 154200, 154300, 154400, 154500, 154600, 154700, 15480

THE ATARI ABC

Now, there's a PC-AT compatible that not only solves problems like other AT compatibles, it also solves the one problem that its predecessors have created ... affordability.

Silica Systems are pleased to present the new Atari ABC. The ABC is a 286 AT compatible that runs at over 5 times the performance of the IBM XT. This is achieved by combining the power and speed of a 16-bit 286 processor, with Atari Corp's development experience and engineering capabilities, which use the very latest in design technology. However, the Atari ABC's are available at 'XT prices' and many XT owners will wonder why they paid more, but got less!

The ABC is a reliable, high performance computer, built to exceptionally rigorous standards. It is well designed, to a state of the art specification, maintaining maximum expansion capability for the future. This includes up to 4Mb of RAM and 3 AT expansion slots. Plus, unusually for a PC at this price, the ABC has the ability to install two or three extra drives, with the cabling already inside the CPU.

The ABC has a host of impressive features, all built-in as standard, encouraging simple installation and ease of use. In addition, the ABC's small footprint and quiet operating, mean that you will notice it less on your desk than other PC's. Except, of course, when you begin to take advantage of its AT power.

At its remarkably low price point, the ABC is ideally suited for home, office and educational use and will take full advantage of the vast range of PC compatible software. And, with 12 months FREE on-site maintenance (8 hour response), you can rest assured that your ABC will be fully supported.

The ABC is the latest addition to a comprehensive range of both 286 (8Mhz or 12Mhz) and 386 (16Mhz and 20Mhz) PC's, from the Business Systems Division of Atari Corp. Atari's PC range offers an unsurpassed combination of reliability, compatibility and expandability, with unique features like Atari's 44Mb removable hard disk on their PC4. Return the coupon NOW for further details of the complete range of PC products from Atari's Business Systems Division.

**ABC
TURBO**
AVAILABLE: JUNE 90

To put the ABC even further ahead of the competition, we have introduced a special 'Turbo' version, which includes a super fast RLL hard disk controller to increase the data transfer rate from 150KBytes/s to 800KBytes/s, with a performance index of 4.801. Plus! We provide exceptional graphics with an outstanding colour resolution of up to 1024x768, we have included a Super VGA graphics adaptor and a 14" VGA colour monitor (which also supports 1024x768 resolution), all for an additional price of only £300. Check the ABC Turbo against the competition, at only £1299 (+VAT) with 30Mb hard disk, Super VGA colour graphics capabilities, plus 12 months on-site maintenance, it offers unbeatable value.

LOW PRICE - HIGH SPEC!

CPU + MOTHERBOARD	<ul style="list-style-type: none"> 8Mhz 80286 16-bit CPU Landmark Speed = 10.3Mhz, Norton SI Test = 9.0 Latest NEAT (New Enhanced AT) technology chip set Has user selectable bus, DMA speeds & wait states Programmable to operate at 0 or 1 wait states 640K RAM base memory (expandable) Motherboard expandable to 4Mb RAM memory Real time clock with battery back-up Full 16-bit data line capability Socket for 80287-8 numeric Co-Processor 16-bit AT expansion slots (max)
DISK	<ul style="list-style-type: none"> 32Mb RLL hard disk - 150KBytes/s transfer - 60ms access Fast disk controller - 800KBytes/s transfer - Turbo version 1.44Mb built-in 3 1/2" floppy disk drive Space for two 5 1/4" and two 3 1/2" drives (max)
I/O	<ul style="list-style-type: none"> Parallel port built-in (25-pin Centronics) Serial port built-in (9-pin RS-232) Mouse controller port built-in (9-pin serial)
GRAPHICS	<ul style="list-style-type: none"> Super VGA video graphics controller - 512K - Turbo vers Super VGA: 256 colours in 800x600 res - Turbo vers EGA video graphics controller built-in EGA: 16 colours available from palette of 64 EGA: 256K of dedicated Video RAM built-in MDA, CGA and Hercules graphics controller built-in
PHYSICAL	<ul style="list-style-type: none"> Low noise operation Ergonomic small footprint (38cm x 41cm x 15cm) Keyboard - 102 key enhanced AT (12 function keys) Keyboard - has position height adjusters
PLUS!	<ul style="list-style-type: none"> Fully OS/2 compatible (requires 4Mb RAM) Supports Industry Standard Networks MS-DOS 3.3 with GW BASIC 3.22 12 Months FREE on-site maintenance included

286 AT

WITH 30Mb HARD DISK & EGA MONITOR - £899

FREE! - ON-SITE MAINTENANCE
FREE! - TECHNICAL SUPPORT HOTLINE
FREE! - TEST/BURN-IN BEFORE DESPATCH
FREE! - OVERNIGHT COURIER DELIVERY

£899
WITH +VAT
**30Mb
HARD
DISK**
AND
**EGA
MONITOR**



**ABC
TURBO**
£1299 EXC VAT
• SVGA COLOUR MONITOR
• SVGA GRAPHICS CARD - 512K
• 30Mb HARD DISK DRIVE
• FAST DISK CONTROLLER

£899 +VAT= £1033.85

ATARI

NO MONITOR

+ EGA MONO

+ EGA COLOUR

	3 1/2" FLOPPY DRIVE NO HARD DRIVE	3 1/2" FLOPPY DRIVE + 30Mb HARD DRIVE
NO MONITOR	£599 +VAT = £688.85	£799 +VAT = £918.85
+ EGA MONO	£699 +VAT = £803.85	£899 +VAT = £1033.85
+ EGA COLOUR	£799 +VAT = £918.85	£999 +VAT = £1148.85
ABC TURBO AVAIL: JUNE 90	£1099 +VAT = £1283.85	£1299 +VAT = £1493.85

SILICA SYSTEMS OFFER YOU

ON-SITE MAINTENANCE (8 hour response): Available Free of Charge on all ABC's.
TECHNICAL SUPPORT HELPLINE: Team of Atari technical experts at your service.
100% QUALITY CONTROL: Every ABC is tested/burnt-in before despatch.
FREE OVERNIGHT COURIER DELIVERY: On all hardware orders shipped in the UK.
ESTABLISHED 12 YEARS: Proven track record in professional computer sales.
£13m TURNOVER (with 60 staff): Solid and reliable with maintained growth.
BUSINESS/EDUCATION/GOVERNMENT: Volume discounts available for large orders.
PRICE MATCH: We normally match competitors on a "Same product - Same price" basis.
SHOWROOMS: Demonstration and training facilities at our London & Sidcup branches.
THE FULL STOCK RANGE: All of your Atari PC requirements from one supplier.
FREE CATALOGUES: Will be mailed to you with offers and software/peripheral details.
PAYMENT: Cash/cheque/credit card/credit - we are licensed credit brokers - details on request.

Before you decide when to buy your new Atari ABC, we suggest you think very carefully about WHERE you buy it. Consider what it will be like a few months after buying your ABC, when you may require additional peripherals or software, or help and advice with your new purchase. And, will the company you buy from contact you with details of new ABC products? At Silica Systems, we ensure that you will have nothing to worry about. Silica Systems is a new division of Silica Shop, the UK's leading Atari specialists. This new division has been established to provide a service to the more serious home user, as well as to business and education purchasers. Silica have been established for over 12 years, and have an annual turnover of £13 million. With our unrivalled experience and expertise, we can now claim to meet our customers requirements with an understanding which is second to none. But don't just take our word for it. Complete and return the coupon now, for our latest Free literature and begin to experience the "Silica Systems Service".

**SILICA
SYSTEMS**

MAIL ORDER: 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX Tel: 081-309 1111
Order Lines Open: Mon-Sat 9:00am-6:00pm No Late Night Opening Fax No: 081-308 0608

LONDON SHOP: 52 Tottenham Court Road, London, W1P 0BA Tel: 071-580 4000
Opening Hours: Mon-Sat 9:30am-6:00pm Late Night: Thursday until 8pm Fax No: 071-323 4737

SIDCUP SHOP: 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX Tel: 081-302 8811
Opening Hours: Mon-Sat 9:00am-5:30pm Late Night: Friday until 7pm Fax No: 081-308 0017

BUSINESS/EDUCATION: 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX Tel: 081-308 0888
Order Lines Open: Mon-Fri 9:00am-6:00pm Closed on Saturdays Fax No: 081-308 0608

To: Silica Systems Ltd, Dept NCE-0790-28, 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX

PLEASE SEND INFORMATION ON ATARI PC's

Mr/Mrs/Ms: Initials: Surname:
Address:
Postcode:
Tel (Home): Tel (Work):
Company Name:
Which computer(s), if any, do you own?

E&OE - Advertised prices and specifications may change - please return this coupon for the latest information



• The '90s alternative to drink and drugs!

The 1990s are set to be the clean decade, the caring, sharing decade, the undecadent decade. Instead of 'getting out of it man' we are all supposed to want to 'get into it... person!'. And you can't get much further in to anything than you can your own brain.

Transcendental meditation, prayer and repetitive activity have been with us for thousands of years now. Drugs were the 1960s route to gaining maximum insight but are far too tacky for the 1990s.

Sensory deprivation, which was fictionalised out of all reality by the film *Altered States*, was the late 1960s and 70s attempt at extracting the maximum power from the brain. The late 1980s saw the computer coming into play, and the theory of 'whole brain thought' began to gain some credence.

WHOLE FOOD

The current trend of 'brain gyms' is backed by this theory. As an idea it is simple enough even for old agers, as opposed to New Agers, to get to grips with; in

BRAIN POWER

Forget squash or golf, the cosmopolitan pastime these days is a trip to the brain gym – and Express is giving you the chance to own your own...

a nutshell the quest is to get both cerebral hemispheres working in unison.

In normal circumstances, the left-hand side of the brain handles abstract activities such as language cognition, speech recognition and perception. The right-hand side deals with the boring stuff such as being able to stand up, sit down and make the tea. Really abstract actions such as imagination and dream production are carried on, well, who knows where. The debate continues on that subject. One side of the debate holds that the two hemispheres don't argue over creativity, but work together to produce it.

Brain gymnastics attempts to bridge the gaps between right and left by use of computer machinery. At first capsules were constructed into which the aspiring brain gymnast would go. Lights, sound, action! Coloured, strobing lights and monotonous sounds which were said to mimic the frequencies of brain waves, produced every second throughout life, were then projected at the gymnast. By attempting to synchronise or mildly deviate from the brain wave patterns, anything from beatific relaxation to thought stimulation was said to be produced.

Capsules are a tad too clumsy for the modern

world so now brain gyms, and even rogue individualists, can make use of mobile units such as the Brain Machine from Cerebral Dynamics or the MC² Dream Machine from Tensor Marketing.

INNER SELF

So now, instead of finding your true self shackled-up with a guru in Katmandu or in a converted church in Amsterdam, you head off to the squeaky clean brain gym. The only one of these we've been able to track down so far has been in Camden Town, London and is called the London Neuro Centre (071-284 4769). Aside from this, of course, you can lay hands on your own cerebral weight-training equipment. ■

WAVING NOT DROWNING

So far four brain wave frequencies have been tracked down and measured: Alpha (8-12Hz), produced during periods of relaxation; Beta (13Hz), produced while active; Delta (1-3Hz), produced in deep sleep and Theta (4-7Hz), produced when one is feeling creative.

WIN your own brain machine

Just the Word

£598 worth of prizes will go to two perceptive readers this week. You've read about the theory (above), now you can put Whole Brain Thinking and legal mind expansion into practice without forking out for a trip to Thailand.

J & M International (UK) Ltd of Gateshead has kindly donated two brain boosting MC² machines, valued at £299 each. Express, in a fit of New Age philanthropy, will pass these thought energising pieces of hardware on to two lucky readers.

The MC² consists of a Walkman-sized unit, earphones and a pair of pretty neat glasses. The unit provides the sound and light impulses which mesh with your brain waves. They are transmitted in colour and throbbing sound via the goggles and 'phones. All you have to do is sit back, close your eyes and be relaxed, enlivened or just plain amazed.

Not only are we offering two free

MC²s, but for the next month Tensor Marketing of Darlington has agreed to provide a £100 discount for

Express readers who wish to purchase MC²s.

If you would like to take up the Express and Tensor Marketing £100-off deal you should call Tensor on 0325 469181.

All you need do to win yourself an MC² is to take a good hard look at every word printed in this week's Express. Somewhere in this issue – either in the

editorial or in an advertisement – is the word **ENERGUMENICAL**. Find the word, then fill in the number of the page it appears on in the space provided on the answer form.

Fill in your name and address and send your entry to Tensor Competition, New Computer Express, 30 Monmouth Street, Bath BA1 2AP, to arrive not later than Monday July 23.

The first two correct entries out of the hat will each win an MC² and be set up for years of power thinking. The editor's decision is final.

WINNERS!

C	no Cracker
F	to be following lucky
W	
G	Gran Reedier Hull Humber
W	Williams Condor Manchester Man
W	W... Cornwall
C	Cambridge Wales
S	Sheld West

NAME

ADDRESS

.....

.....

.....

The page containing the word **ENERGUMENICAL** is.....

BEST

- Bargains
- Advice
- Prices
- Offers
- Jobs

SHOPPING

EXPRESS

The *weekly* computer market place for people *serious* about buying

THIS WEEK'S BUYERS' GUIDE

DTP

GRAPHICS

AND

DIGITISERS

**Essential reading for
artists and publishers**

**JOB
SHOPPING?**

Check out our
recruitment section inside

ALSO INSIDE

● **Take**
advantage of our
latest mail order offers.

● **Benefit**
from our reliable buy-
ers' guides. No waffle,
just facts.

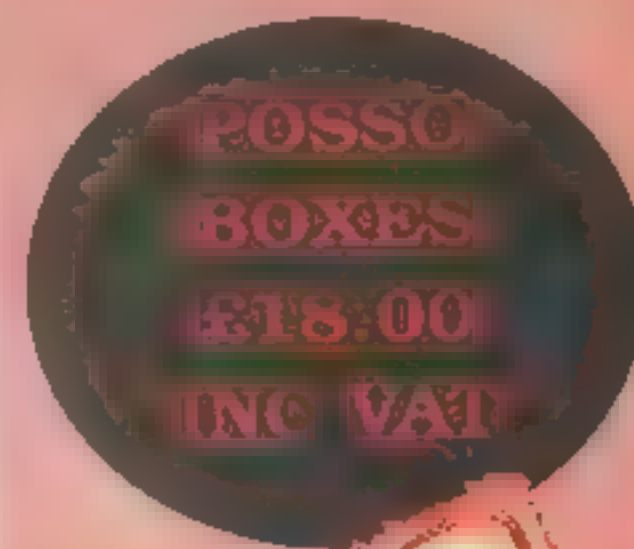
● **Pick up**
bargains galore from
dealers and readers
from all over the UK.

● **Score**
on the free reader
adverts. Sell your prod-
ucts for *absolutely no*
charge!

**Save your cash,
save your time**



STOP!



PRICE PLEDGE

IF YOU CAN BUY BETTER THAN THESE PRICES WE
WILL NOT MATCH, BUT BEAT ANY ADVERTISED PRICE

GUARANTEED

BULK DISKS ie MITSUBISHI, KAO, VERBATIM, Double Sided Double Density 880K 135TPI, for Amiga or ST, Blue, Pin No. 100% error free. 2 for 1 replacement or money back

* 50	x	31/2	41p	All * disks include
* 75	x	31/2	40p	Labels + Sleeves
* 100	x	31/2	39p	in price advertised
* 250	x	31/2	38p	Buy in Quantity
500	x	31/2	37p	and SAVE MONEY!
1000	x	31/2	34p	
2000	x	31/2	33p	
5000	x	31/2	31p	

(uncertified) no warranty 29p

NB You may buy cheaper, but you will have faults, all disks carry our unique 2 for 1 guarantee

SONY BULK DISKS

In Sony Boxes, Double Sided Double Density 880K, Blue or IBM Grey 100% Error Free.

* 50	x	Sony	50p
* 75	x	Sony	49p
* 100	x	Sony	48p
* 250	x	Sony	47p
500	x	Sony	46p
1000	x	Sony	43p
2000	x	Sony	39p
5000	x	Sony	36p
10,000	x	Sony	34p

Prices
From only
291/2p
+VAT

All * disks
include
Labels +
Sleeves

51/4 48TPI/96TPI

50	x	51/4	bulk	@ 27p
100	x	51/4	bulk	@ 25p
250	x	51/4	bulk	@ 23p
1000	x	51/4	bulk	@ 21p

From
only
18p ea
+VAT

51/4 HD 1.6MB

50	x	51/4	1.6Mb disks	44p
100	x	51/4	1.6 disks	42p
250	x	51/4	1.6 disks	41p
1000+	x	51/4	1.6 disks	POA

All 100% Error Free,
with envelopes labels and W/P Hi-Clip
product package in bags of 25 disks

STOP PRESS: SONY BRANDED 31/2 HIGH DENSITY NOW £1.99 ea

STORAGE BOXES

ANTI STATIC LOCKABLE DISK BOXES
with 2 keys, hinged lid and dividers.

31/2	x	Holding	10	1.20
31/2	x	Holding	40	3.50
31/2	x	Holding	80	4.50
31/2	x	Holding	100	4.90
51/4	x	Boxes		POA

STACKABLE DISK BOXES

"NEW" POSSO BOX, stackable in black or grey
hold 160 31/2 or 51/4 disks.

31/2 Posso stores 160 disks @£18.00

"NEW" BANKS BOX stackable in Amiga grey to
hold 80 31/2 disks

31/2 BANKS stores 80 disks £10.00

NECESSARIES

Mouse Mats (Choose your colour)	1.80
ST/Amiga Dust Covers	1.90
31/2 Cleaning Kits	1.95
Roll 1000 Disk Labels (Any colour)	6.99
Mousey Housey	1.99
2 Piece Printer Stands	6.90
ST Joystick Extension	4.50
IBM Parallel Cables	4.99
Monitor Stands Tilt/Turn	10.99

1/2 TRACTOR FEED LABELS

Plain on roll 1000 2p ea or 14.00 per roll
Wire Printer Stands 80/130 Column

JOYSTICKS	
Konix Navigators	12.99
Quick Joy V Superboard	28.00
Konix Speedking	9.99
(inc Clock, variable speed, alarm)	
RIBBONS We stock all Ribbons Call for details POA NOW!	

NEW JUST IN!

Amiga - Replacement Mice Atari ST - Replacement Mice
(Buy 1 and get a FREE Mouse Mat and Mouse
House Hi-Quality RRP 26.99
NOW £19.50 WHILE STOCKS LAST

IBM ETC
AVAILABLE
CALL FOR
DETAILS

GENIUS MOUSE GM600

Stock Clearance £38 with Microswitches.

AMIGA SOUND BLASTER 50 WATT Bass Reflex
Cone Speakers and Sound Blaster Hardware. Words fail us,
simply a must! Call for FREE Demo! And listen.

Stock Clearance £59.00

X-COPY II 1.9 with software! The ultimate Back-up and
Utility Gadget for the Amiga works on A500 to A2000 with
up to 4 drives! Formats in under 36 seconds, Backs up most
disks ST, IBM etc

Will backup 99% of all programs or disks £29.99

STOP PRESS: SONY BRANDED 31/2 DS DISKS 135TPI DSDD @ 76p

KICK START CARD

Allows user to boot from 1.2 to 1.3£18.95

VIRUS PROTECTOR

Hardware, protecting Boot Block from all
Virus and software to kill all virus that do not
start at Boot Block, plug it in, switch it on
and forget it. No more VIRUSES!£18.99

ELECTRONIC BOOT SELECTOR

Allows users to Boot from DF1,
2 or 3POA

NORDIC POWER

As advertised£59.95

DISK DRIVES

31/2 External Drives S-Sided, Throuport, Disable Switch	£49.00
31/2 External Drives Double Sided, Throuport, Disable Switch	£59.99
31/2 Internal Drives (limited stocks of Epson, NEC)	£59.00

ORIGINAL Commodore

31/2 1010 Drive£70.00 ea.

AMIGA UPGRADES

1/2 Meg Upgrade (4 chips) without clock	£40.00
1/2 Meg Upgrade (4 chips) with clock	£45.00

1/2 Meg Expandable Upgrades

Many items now available (ie) upgrade your
ST or Amiga from 4 to 8Mb now or over a
period of time.

Buy an expandable Upgrade from£58.99
and watch it grow!

NEW 2MB Upgrades POA

CALL FOR
DETAILS!!

VISA

0827-500000

24
HOURS

Access

E.C.S.

DEPT MA. Unit 91, Abbotsgate Developments,
Glascote Road, Tamworth, Staffs. B79 9AB

THE SHOPPING EXPRESS BUYER'S GUIDE TO DTP, GRAPHICS AND DIGITISERS

The computer has revolutionised the publishing industry. With some software and a few hardware add-ons it's now possible to create entire documents on screen, complete with photographs and illustrations. To find out what's available, read on...

From paste-up to PostScript, the world of desktop publishing has arrived on your micro. So whether its a club newsheet or a magazine like *Express*, there's a variety of packages ■ suit your needs.

Desktop publishing sells computers. Its massive growth in recent years on the Apple Macintosh and PCs has spawned a wide range of products for other micros. But you could easily spend £10,000 on a system so what should you look for if you've only a few hundred at your disposal? *Express* looks at the DTP packages that will allow you to input, import and edit text and graphics in a friendly environment. Last week we looked at scanners, so for good measure we also include a round-up of another means of importing pictorial material into your publishing efforts - digitisers.

PC DTP GUIDE

It's best to go for GEM-based DTP packages as they all offer output to dot-matrix and laser printers - and the device-independent, page description language PostScript used by professional printing companies.

● VENTURA PUBLISHER V2

Rank Xerox • 0895 51133
£914

A GEM-based heavyweight supporting documents up to 999 pages, and offering master templates, style sheets and text import. A comprehensive range of features with precise control over layout and typography ideally suited for technical applications.

- ▲ Complete PC DTP for business and technical documents
- ▲ Fully automated text entry and layout

▼ Can't flow text around graphics

▼ Expensive

Value for money ★★★★★

● PAGEMAKER 3

Aldus Europe • 031-336 1727
£800

Running under Microsoft Windows and geared towards the pro-graphics designer, needs a 286 or 386 for effective use. Documents can be up to 128 pages, text can be flowed around graphics very easily and the package includes colour support. Perhaps most useful, parts of pages can be worked on separately and then combined when completed.

- ▲ Allows simultaneous control of different page components
- ▲ Easy to use with its pop-up menus

▼ A little slow even on fast PCs
▼ Price

Value for money ★★★

● FINESSE 2

Logi UK • 0925 413501
£171

Once known as AMS, this GEM-based package works with frames, but treats input or imported text and graphics separately and colour codes them. Documents may be up to 16 pages, and masters and paragraph styles can be pre-recorded for fast layout.

- ▲ Flexible with many useful features
- ▲ Good manual with excellent tips on design

▼ Limited typefaces

Value for money ★★★★★

● JETSETTER 4

Garbo Systems • 0736 67166
£399

A wide variety of fonts and text sizes up to 750 point make *Jetsetter* unique.

Separate menu driven screens for graphics and text allow good control of graphics but limited text editing functions. However graphics are bitmapped and can't be resized larger than the original

- ▲ Excellent with a laser printer
- ▲ Versatile graphics handling

▼ Difficult text editing

Value for money ★★★

● TIMEWORKS DTP

GST/Timeworks • 0954 81991
£129

ALSO AVAILABLE FOR ATARI ST

One of the first medium priced DTP packages, GEM based and compatible with the wide range of Bitstream Fontware. A frame based system incorporating master templates, paragraph styles, page guides and automatic text wrap-around graphics. *Timeworks* also includes a good range ■ drawing facilities and is able to handle documents up to 999 pages.

- ▲ Excellent DTP at budget price
- ▲ Imports wide range ■ text and pictures

Value for money ★★★★★

● FLEET STREET EDITOR

Mirrorsoft • 071-928 1454
£184

ALSO AVAILABLE FOR ATARI ST, AMSTRAD PCW, AMSTRAD CPC, BBC

A GEM style package, Bitstream font compatible, but generally slower to use than real GEM DTPs. Both text and Graphics can be manipulated on the same screen and overlap each other. A wide selection of clip art is supplied but the working document has to be reloaded before insertion.

- ▲ Good clip art selection
- ▲ Wide file format supported

▼ No automatic reflowing of text
▼ Relatively slow and unfriendly

Value for money ★★

● GEM DESKTOP PUBLISHER 2

Digital Research • 0635 35304
£397

You might expect something special from GEM's authors but what you get is a package which ■ very memory intensive although offering the usual page layout, paragraph tags and frame-based text formatting. On the plus side, it does include good text and graphics import and the rare ability on PCs to alter spacing between words.

- ▲ Inexpensive frame formatting
- ▲ Flexible text handling

▼ Slow

Value for money ★★

AMIGA DTP

● PUBLISHER'S CHOICE

HB Marketing • 0895 444433
£99.95

Coming complete with the *Kindwords* word processor, the *PageSetter* text and graphics editor, a disk of headline fonts and the *LaserScript* utility that configures your documents as PostScript compatible, this really is a choice product. Working on the frame and grid principle, PC provides separate text, graphics and layout screens with the useful addition of full feature pasting facility.

- ▲ An comprehensive package
- ▲ Includes spell checker and thesaurus

▼ Slight lack of integration between component parts

Value for money ★★★★★

DATAPLEX

129 Bath Road
Slough Berkshire
SL1 3UW
Tel: 0753 35557

19 High Street
Swindon, Wiltshire
Tel: 0793 488448

Showroom open

Monday Friday 9.30 - 5.30 Saturday 9.30 - 4.30
All prices excluding VAT and delivery

AMIGA HARDWARE

Amiga 500 + Batman Pack & 5 games, joystick £345.00
New Amiga Flight of Fantasy Pack - £317.00

AMIGA BATMAN PACK £317

New from Amiga

Includes: TV modulator, 3.5" Disk Drive with Amiga
DOS Kickstart, Workbench and Batman The Movie
game, F18 Inceptor, Paint 2, New Zealand Story.

AMIGA ACCESSORIES

Inc. database, spreadsheet, WP, music, art &
design, logo and BBC emulator.

Amiga Class of the 90's.....£439

Amiga A501 RAM pack + Clock (original).....	£85
Amiga Joystick	£10
TV Modulator.....	£15
Phillips CM8833 colour monitor + lead	£199
Phillips BM7502 12" green monitor.....	£79
Phillips BM7522 12" amber monitor.....	£89
Amiga To Philips cable	£8

AMIGA DRIVE

1 Meg 3.5" external.....	£68
1 Meg 3.5" internal	£63
1 Meg 5.25" external.....	£99

ATARI DRIVES

1 Meg 3.5 external.....	£68
1 Meg 5.25 external	£99
1 Meg 3.5 internal	£63

ATARI COMPUTERS

520 STFM Discovery Pack.....	£248
520 STE Power Pack.....	£325
1040 STE.....	£378

SCANNERS

Atari Scanner.....	£169
Amiga Scanner	£169

MOUSE

Naksha mouse.....	£29
-------------------	-----

STAR PRINTERS

Star LC10 mono.....	£135
Star LC10 II mono	£159
Star LC10 colour.....	£168
Star LC2410 + lead + stand	£215
Star LC15 9 Pin 136 column.....	£264
Star LC2415 24 Pin	£328

PANASONIC

Unbeatable Prices!

Panasonic 1081	£125
KXP 1124 + lead + stand	£215
KXP 1624/132 column, 24 Pin	£349
KXP 1180	£144

CITIZEN PRINTERS

Citizen 120D.....	£120
Citizen 180E.....	£127
Swift 24	£255
Colour upgrade for Swift	£42

MANNESMAN TALLY

Mannesman MT 81 Dot Matrix.....	£115
Mannesman Sheetfeeder.....	£62
Mannesman Serial Interface	£49

REPAIRS FOR AMIGA AND ATARI

PROFESSIONAL PAGE

HB Marketing • 0895 444433
£249.50

Based on the industry standard, Pagemaker, frame-based documents can be picked up moved off page and re-pasted at will and ease. Supporting text flow, zooms, handy drawing utilities and high-resolution bitmapped graphics, PP also offers colour separation control - at an amazingly low price. There's a page review mode and PostScript printing is also catered for.

- ▲ Excellent value for money
- ▲ Perfect for high-resolution pages and colour separation

▼ Needs two drives or a hard disk

Value for money ★★★★★

PAGESTREAM

Silica Systems • 081-309 1111
£171.35

A frame based package, which also uniquely allows you to rotate text and graphics material in three dimensions. Aside from the usual DTP features, page view, variable zooms, automatic text wraps, and a range of text styles make the product very comprehensive.

- ▲ A wide range of flexible control
- ▲ Unique 3D text and graphics handling

▼ Limited colour separation

Value for money ★★★★★

CITY DESK

Precision Software • 081-330 7166
£157

A different approach offers the user a column-based formatting package in which imported text can be shunted around the page as if it were a graphic object but font, sizing and style attributes are messy. A rather simplistic graphic editor does it business adequately enough but despite some power, CD suffers from the lack of a GEM-type interface.

- ▲ A powerful low-cost package
- ▲ PostScript supported

▼ Formatting commands entered as code

▼ Terrible manual complements a difficult interface

Value for money ★★★

SHAKESPEARE

Cloudhall • 0604 231 2111
£99

The only budget DTP package that allows colour on the page to be carried through to hard copy also supports mono PostScript output and is frame-based. However there's no zoom facility and font, style and size attributes are lost when text is reflowed. IFF colour graphics can be imported but not HAM, however 32 colours can be displayed on screen and palettes changed accordingly.

- ▲ Ideal for colour printer owners
- ▲ Accurate text positioning

▼ No format data can be imported

with text

▼ No drawing tools included

Value for money ★★★

ST DTP

PUBLISHING PARTNER

Click ST • 0753 682 988
£159.99

Excellent GEM-based pagemaker system, with multiple-on screen pages, impressive range of fonts and text sizes and facility to import different ST graphics formats. Also includes a range of drawing tools and variable magnification. Fast screen updates and high quality printer output

- ▲ Comprehensive and fast
- ▲ Excellent value

Value for money ★★★★★

SIGNUM 2

Signa • 0252 31600
£184

Billed as a document processor, Signum allows text to be placed and adjusted to accuracies of up to 1/90th of an inch as well as imported graphics and technical fonts and symbols. Dot-matrix and laser printers are supported.

- ▲ Fast screen updates and response
- ▲ Compatible with Signa's scanners, digitisers and Mac emulators

▼ Price

Value for money ★★★

Also available:

FLEET ST

£115

TIMEWORKS

£99.95

see PC guide above for comments

ARCHIMEDES

IMPRESSION

Computer Concepts • 0442 63933
£171

Designed specifically for RISCOS, Impression multi-tasks with other applications and supports data transfer between them. Capable of handling complex magazine layouts it comes with an outline font manager and typesetting quality print-outs.

- ▲ Ease of import and editing
- ▲ Super-fast screen handling

Value for money ★★★★★

ACORN DTP

Acorn • 0223 245200
£149

Similar to the original PageMaker for the BBC B, Acorn's own package is based around frames into which a wide range of text styles, sizes and fonts can be combined with a range of imported graphics to produce high-quality printed output

- ▲ Demands a knowledge of DTP
- ▲ Fast screen handling

Value for money ★★★

PML PANDAAL MARKETING LTD

DATAscan Personal

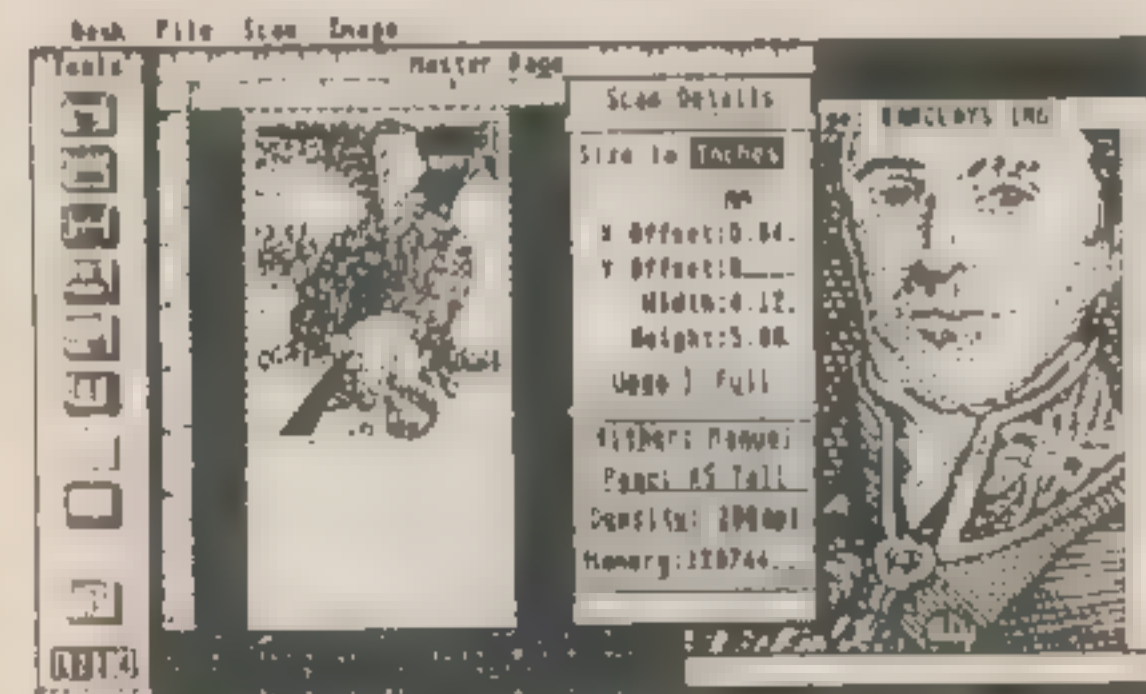


High quality 200 DPI Mitsubishi hand held scanner with 16 grey scales, 105 mm scan width and immediate real-time display. This great introductory offer to scanning comes complete with easy to use GEM based DATAscan Plus software. Software features full editing facilities, rotate, negate, fill, copy & paste, zoom, brightness, clear, rescale and supports IMG, DEGAS & NEO formats.

Order Code AT20

£169.95

DATAscan Professional

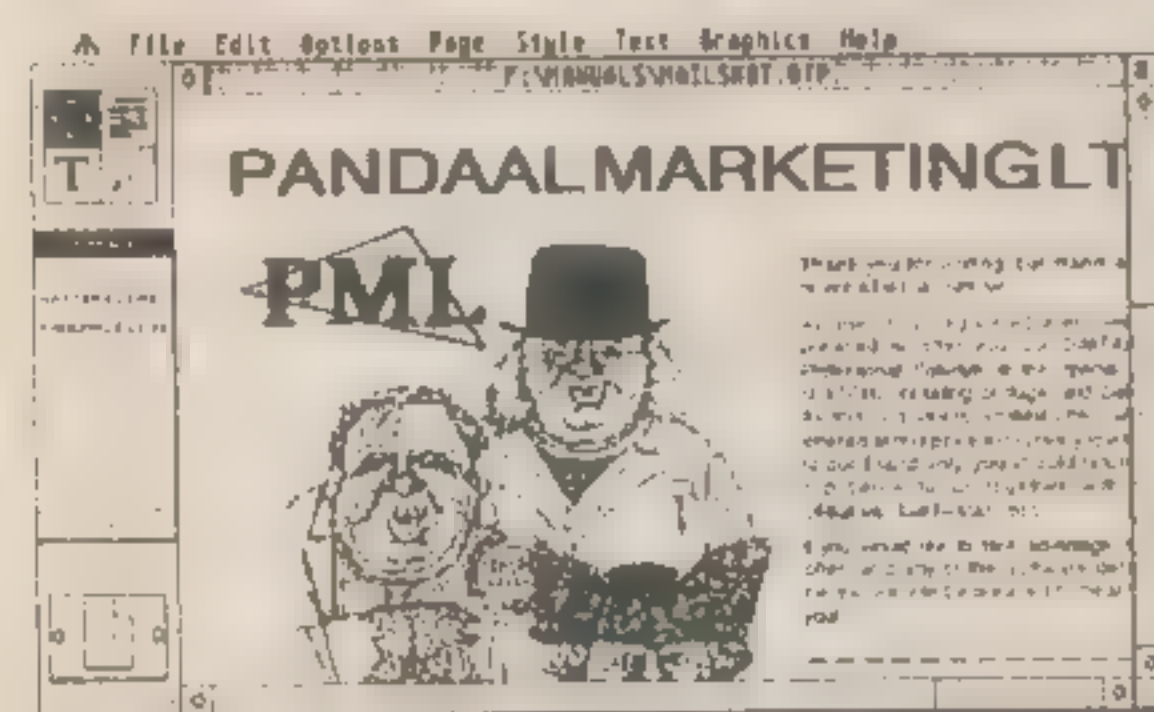


High quality Mitsubishi hand held scanner designed for professional users, with 105 mm scan width and can operate in 100, 200, 300 or 400 DPI in one of 3 dither modes or a two tone B/W mode. The DATAscan Professional software features immediate real time display, cropping, 3 zoom levels for pixel editing, direct printing to Atari Laser/Epson printer and is compatible with DTP packages such as Timeworks and Calamus and can be used in conjunction with OCR packages. Supports IMG and DEGAS file formats.

Order Code AT25

£199.95

The Complete DTP Solution



Comprises either DATAscan Personal or Professional with Timeworks Publisher DTP software. Timeworks features 5 fonts, 8 text styles, text file and graphics file import, style sheets, paragraph tags, justification and full editing facilities all within a frame based layout.

Order Code AT01 (with D'scan Personal) £199.95
Order Code AT02 (with D'scan Pro) £229.95



All prices include VAT & postage
Phone now or order by Access/Visa

0234 855666

or send your order by post stating the product names and order codes, cheques paid to PML
When ordering state the reference no. STF6



Pandaal Marketing Ltd, Dept NCE, 44 Singer Way,
Woburn Road Industrial Estate, Kempston, Bedford, MK42 7AF

KEMPSTON

MITSUBISHI



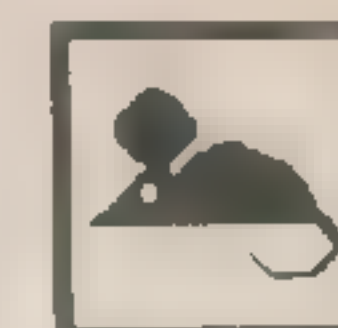
The following products are also available



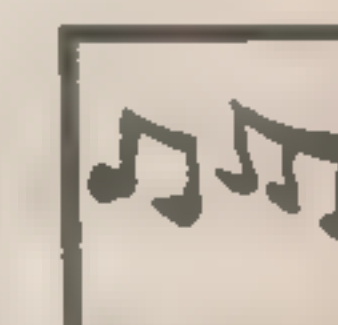
DATA disk Drive
AT40
£79.95



DATApro Joystick
OP10
£12.95



DATAmouse
AT35
£34.95



MASTER sound
AT50
£29.95



DATA fax
AT10
£29.95

AMSTRAD PCW

● STOP PRESS

Database • 051-357 2961
£49.99

A well-designed desktop publisher which doubles up as a graphics package. Besides being able to display data as graphs, pie charts etc, and manipulate draw objects, there's also a zoom feature, image superimposition and a clip art library. You can print up to 108 pages in one go, choose from 14 different fonts and use up to 96 point type size.

▲ Great graphics handling
▲ Accurate positioning and layout

▼ Poor facility to undo mistakes.

Value for money ★★★★★

AMSTRAD CPC

● STOP PRESS

Database • 051-357 2961
£49.99

The DTP package for the CPC, Stop Press allows you to produce text of any size with a wide range of fonts and run it around illustrations you've drawn and edited. You can make line adjustments, add patterned borders, create boxes, add shaded backgrounds and even fill circles with text.

▲ An impressive and comprehensive all-rounder
▲ Fantastic text and graphics handling

▼ You need a mouse

Value for money ★★★★★

COMMODORE 64

● STOP PRESS

£39.99
See notes above

BBC

● WAPPING EDITOR

Watford Electronics • 0923 37774
£69

Coming on a 64K ROM, this package has a sophisticated graphics module, typesetting software, a word processor, font editor and a variety of printer dumps. It's mouse control allows you to create pages from A6 to A3, and print up to 150 characters across a A4 page. Multiple columns and pages are also supported.

▲ Very user friendly
▲ Extremely comprehensive range of features

Value for money ★★★★★

PC GRAPHICS

● PC PAINTBRUSH

Microsoft • 0734 500741
£145

Bitmapped painting package which offers a reasonable range of tools and functions

to build impressive graphical displays. This program allows you to perform everything from simple sketches to complex and colourful designs.

▲ Microsoft is synonymous with quality
▲ Moderately easy to use

▼ Not cheap

Value for money ★★

● DELUXE PAINT II

Electronic Arts • 0753 46465
£99.95

Comprehensive painting program also available for other machines which features functions such as dithering, lots of fills, stencils, in fact everything necessary for the budding silicon artist.

▲ Comprehensive and fully featured
▲ Gets the most from the limited PC display

Value for money ★★

● CORELDRAW!

CTRL ALT DELI • 0908 662759
£460

Advanced paint program with many functions including full traced bit-mapped graphics, lots of colours and fills and an easy to learn user interface. If you have a yen to tinker with paint and design but don't want to learn complex command sequences this is for you.

▲ Easy to learn and use
▲ Bit mapped graphics

Value for money ★

● VP GRAPHICS PLUS

Paperback Software • 0245 265017
£114.95

Not a paint package as such but rather a program which allows you the user to produce graphs and charts depicting a variety of information. You can draw histograms, pie charts, line graphs in fact everything necessary for business graphics display.

▲ Full range of charts available
▲ Easy to use

▼ Not for artists

Value for money ★★

AMIGA GRAPHICS

● DELUXE PAINT III

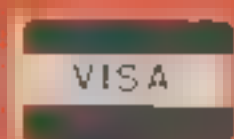
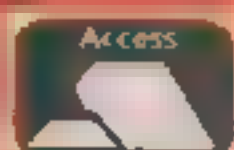
Electronic Arts • 0753 46465
£79.95

The painting package for the Commodore Amiga. All possible functions including dithering, patterned fills, stencils, use of perspective, rotate and scaling effects as well as wrap fills, shadow painting using EHB and last but not least incredible animation making full use of all available tools.

▲ All possible painting functions
▲ Powerful animation

▼ A little daunting

Value for money ★★



EUROPEAN PERIPHERAL DISTRIBUTION

Peripheral House
DEPT NCE, Unit 36 Cranford Gardens
Compton Acres
West Bridgford
Nottingham
NG2 7SE

Telephone (0602) 841640

BANK DISKETTES

The most economical 3.5" disk storage system, with all these features on the market

Pull out drawer.

Lockable with two keys.

Stackable both up & sideways.

Holds 90 3.5" Disks

ONLY £11.95



3.5" DISKS FROM JAPAN

Double sided 3.5" Discs. Individually Wrapped, 880K 135tpi, ideal for Amiga, ST, Etc. Made in Japan. 100% Error Free. 2 for 1 Warranty or Money back.

Minimum Quantity 50 Disks

£0.39 each

Genuine 'Sony' 3.5" discs. Double sided. Made in Japan, sold in Sony outers, probably the best disks in the world!

Minimum Quantity 50 Disks

£0.42 each

3.5" Diskette box holds either 100 or 50 3.5" disks

box to hold 100 3.5" Discs

£4.95

box to hold 50 3.5" Discs

£3.95

Prices for disk boxes are if disks bought at same time.

A500 Dust Cover

£3.50

Replacement Amiga Mouse

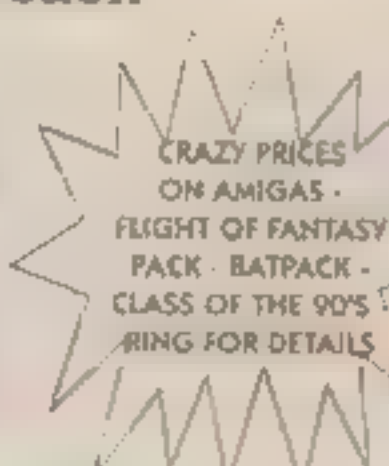
£19.95

with free mouse mat & mouse holder

STOP PRESS STOP PRESS STOP PRESS

**CHINNON 3.5" EXTERNAL DRIVE NEW IN.
LATEST SLIMLINE DESIGN
ONLY £62.95**

A590 RAM UPGRADE CHIPS 1/2 Mb £39 - 1Mb £79 - 2Mb £159



Sourced From Europe's Leading Electronic Manufacturers

Sound Sampler for A500/1000 inc. Software **£29.99**

Midi Interface. High Quality for A500/1000/2000 midi in, midi through, 2 midi outs. **£29.99**

Boot Selector for A500/1000/2000 allows you to boot from an external drive DF1. **£14.95**

Kickstart Card for Amiga A500/2000 allows you to switch between Kickstart 1.2 or 1.3 (Includes original rom 1.2 or 1.3 please state) easy to fit, no soldering. **£49.95**

END YOUR VIRUS PROBLEMS!

Hardware device that simply plugs in to disk drive port and prevents any boot block virus writing itself to your expensive disks. Protects internal drive as well as any other floppy drive connected. Through port. On/Off switch. L.E.D. to indicate protection on.



£19.95

Will work with all known Virii

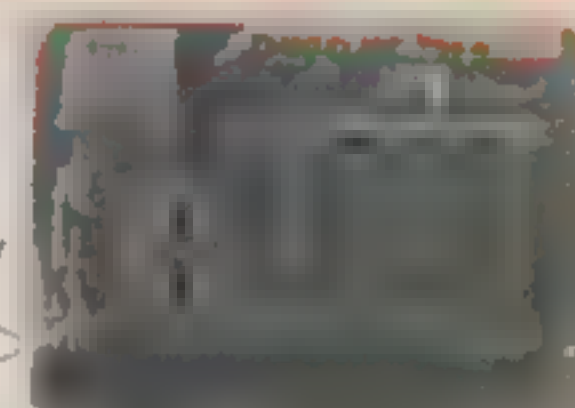
128K RAM UPGRADE

Amiga A500 ram expansion, one of the smallest expansions on the market. Top marks when reviewed in Amiga Format. Inc FREE 1Mb demo.

Replaces A501 expansion.

Built in Clock version **£48.95**
Without Clock **£44.95**

STOP PRESS 2Mb £215



£48.95

NORDIC POWER CARTRIDGE

Get the most from your computer. Get inside where the action is. Freeze it to ice for tomorrow's use. Easy to fit, easy to use. It is a must for expert programmers and beginners. Impress your friends with the ultimate computer tool. Once you have used it you will never work without it!

* SUPER PROGRAMME FREEZE (SAVES LEVEL TO REPLAY AT ANY TIME) * BACKUP FOR 2 DRIVES * FULL MACHINE LANGUAGE MONITOR (DISASSEMBLER ANY FILE AND SEE HOW IT WORKS, ASSEMBLE YOUR OWN CODE, HEX DUMPS, ETC.) * GRAPHIC UTILITY (GETS ANY SCREEN OUT OF A GAME, NUMEROUS ADJUSTMENTS FOR GRAPHICS, SAVE AS IFF FILES, ETC.)



£59.95

SOUND SCANNER (FIND SAMPLES WITHIN A GAME, SAVE SOUNDS AS IFF FILES, SOUND EDITOR TO ALTER SOUNDS FOR YOUR OWN USE) * TRAINING MODE (SLOW DOWN A GAME TO GET PASSED THAT DIFFICULT LEVEL) * INTEGRATED SLIDE SHOW (COMPILE A DISK OF YOUR FAVOURITE GRAPHICS AND VIEW THEM FROM THE SLIDE SHOW) * MANY MORE FEATURES TOO NUMEROUS TO MENTION * RING FOR DETAILS.

PICTURE REPRODUCED BY KIND PERMISSION FROM DATA & ELECTRONICS

NORDIC POWER & ACTION CARTRIDGE ARE REGISTERED TRADEMARKS

3 1/2" DSDD DISKS

100% CERTIFIED
ERROR FREE

PRICE INCLUDES
VAT & LABELS

ALL OUR DISKS
ARE FULLY
GUARANTEED

40P

100 Capacity Disk Box £5.50: With Disks £4.50
12 Capacity Boxes 95p each £7.50 for 10
Quality mouse mats £2.50
3 1/2 inch High Density disks £1.00 each.
150 Capacity stackable Posso Boxes at £16.95

AMIGA 512K UPGRADE WITH CLOCK £46.50

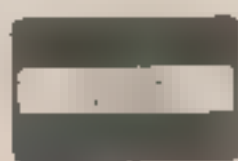
PLEASE ADD £2.95 P+P PER ORDER

All our disks are of the highest quality
and are manufactured by Mitsubishi or Verbatim
Cheques/PO's to:-

MEDIA DIRECT - DEPT NCE
11 SAGE CLOSE, HANLEY

S-O-T ST1 3SF

TELESALES HOTLINE:
0782 - 208228



Seven Disk

3.5 inch Disks + boxes

10 disks + 10 capacity storage box - £16
25 disks + 50 capacity lockable box - £26
50 disks + 50 capacity lockable box - £26
100 disks + 100 capacity lockable box - £48
200 disks + 2 100 capacity lockable boxes - £90

For a
stackable/lockable
Bant high quality
90 capacity disk box
add £9 to
these prices
Bant disk box
without disks £12

Best quality unbranded disks

3 1/2 inch DSDD
100% Guaranteed

Includes
labels
and
postage
10 + 50p a disk
25 + 45p a disk
50 + 43p a disk
250 + 40p a disk
500 + 37p a disk
1000 + 35p a disk

5 1/4 inch DSDD
100% Guaranteed

Includes
labels
sleeves
and
postage
10 + 30p a disk
50 + 29p a disk
100 + 28p a disk
250 + 27p a disk
500 + 26p a disk
1000 + 25p a disk

Other Supplies

Disk Cleaning Kits (3 1/2 & 5 1/4) - £2.00
Disk Boxes
10 capacity - £1.20
50 capacity - £1.50
100 capacity - £1.50

Box of 1000 3 1/2 disk labels - £4.00
ST520 1041 and Amiga 500 dust cover - £1.00
Colour Moni dust cover - £3.95
Mouse joystick 2 metre extension - £4.00

Prices are fully inclusive of VAT + postage (UK only)
No nonsense - just fantastic value

Super Value

Cheques Postal Orders payable to Seven Disk. Or send Access Visa card number expiry date and signature
Seven Disk, (NCE), Digswell Water Lodge, Digswell Lane,
Welwyn Garden City, Herts. AL7 1SN
24 hr order line - Tel: 0438 840456

● PHOTON PAINT 2

Microillusions • 0480 49497
£79.95

This is the package for the novice. A very easy to use painting program that is both powerful yet simple to learn and exploit. There's full use of HAM modes, airbrush, texture mapping, variable blend control and animation. Recommended.

- ▲ Easy to use
- ▲ Many functions including animation

Value for money ★★★★★

● PROFESSIONAL DRAW

HB Marketing • 0895 444433
£155

For those who want to create professional designs this is the package. Professional Draw has an easy to understand user interface featuring many icons which relate well to their respective operations making it easy to get the most from the program.

- ▲ Structured approach simplifies operations
- ▲ Reasonably priced for professional quality CAD

▼ Requires a little draughting knowledge to get the most from the program

Value for money ★★★

● DIGIPAIN V3.00

HB Marketing • 0895 444433
£60

The original and still one of the best. Fully-featured HAM painting package with sexy functions such as 4,096 colours on-screen and lots of special effects including shading, blending and tinting. What's more this latest version also features text, overscan and texture mapping and is £20 cheaper than earlier versions.

- ▲ Plenty of features for the money
- ▲ Special effects tools

▼ Not the most comprehensive paint package

Value for money ★★★★★

ATARI ST GRAPHICS

● CYBER PAINT

Electric Distribution • 0480 496666
£69.95

Breathtaking bitmapped animation and graphics package from American magazine/software publisher Antic. This program features some incredible effects including tweening (changing one object to another a line at a time) and very powerful animation functions. Rivals the Amiga and is highly recommended.

- ▲ Very powerful animation
- ▲ Stunning effects
- ▲ Cheap

Value for money ★★★★★

● DEGAS ELITE

Electronic Arts • 0753 46546
£24.95

Like Digipaint for the Amiga, Degas Elite was one of the very first painting programs available for the Atari and it's still one of the best. You can have up to eight word screens at once cut and paste between any of them and there are plenty of useful and powerful functions such as zoom, block handling etc.

- ▲ 8 screens available
- ▲ Powerful block handling

▼ Lacking in features when compared to latest offerings

Value for money ★★★

● SPECTRUM 512

Electric Distribution • 0480 496666
£59.95

Painting package featuring (as its name suggests) 512 colours. The program is simple to use and effective. There's some very powerful functions too in the form of anti aliasing and gradient fill.

- ▲ Lots of colours
- ▲ Easy to use

▼ A little expensive

Value for money ★★

● ADVANCED ART STUDIO

Rainbird • 071-240 8838
£22.95

Aimed at those with a serious interest in producing quality art/graphics displays. The Advanced Art Studio has an enormous range of fills as well as comprehensive zoom and text handling complete this package.

- ▲ Lots of fills
- ▲ Powerful manipulation tools

Value for money ★★★★★

ARCHIE GRAPHICS

● ATELIER

Minerva Software • 0392 437756
£99.95

The Acorn Archimedes with its immense computing power is the ideal machine for complex graphics manipulation and Atelier from Minerva Software exploits that power to the full. All tools and functions necessary for complex design and drawing.

- ▲ Powerful and comprehensive
- ▲ Easy to use

▼ A little expensive

Value for money ★★★

● PRO ARTISAN

Clares Micro Supplies • 0606 48511
£99.95

Professional release of the evergreen Artisan paint program. This package features 256 colours and 15 modes of operation.

- ▲ Lots of help screens

▼ Requires at least 1Mb of memory

Value for money ★★★★★

PCW GRAPHICS

● MASTERPAINT/ MASTERSCAN

Database Software • 051-357 2961
£79.95

PCW and painting programs? Now is a possibility with MasterPaint from Database Software. You can draw circles, ellipses, boxes, use fills cut and paste etc. There's comprehensive text manipulation and a variety of fonts. Only available with the Masterscan scanner

- ▲ Fully featured
- ▲ Exploits the power of your PCW

Value for money ★★★★★

CPC GRAPHICS

● ADVANCED ART STUDIO

Rainbird • 071-240 8838
£22.95 disk only

Very similar to the Spectrum and Commodore 64 versions this popular painting package produces pixel appointed perfection and performs well!

- ▲ All the features necessary for pretty pictures
- ▲ Reasonably priced

Value for money ★★★★★

SPECTRUM

● ADVANCED ART STUDIO

Rainbird • 071-240 8838
£22.95

Superior painting program for Spectrums equipped with 128K or above. Plenty of fills, colours and features such as zooming, windows and text handling. Reasonably priced and featured.

- ▲ Plenty of tools, colours and fills
- ▲ Easy to use

Value for money ★★★★★

COMMODORE 64 GRAPHICS

● ADVANCED ART STUDIO

Rainbird • 071-240 8838
£22.95 disk only

Very similar to the Spectrum version but works with the basic Commodore 64 as well as the larger RAM memory machines. Fine range of features for a reasonable price.

- ▲ Full featured
- ▲ Plenty of colours
- ▲ Works with the 64K machines

Value for money ★★★★★

DIGITISERS

● VIDI

ROMBO PRODUCTIONS • 0506 414631

(free demo disc available)

FOR PC £115

FOR AMIGA £99.95, £119.95

(colour version)

FOR ST £99.95

FOR PCW £99.95

FOR CPC £99.95

Grabs 16 shades of grey from videotape recorder or camera with software. the plug-in card feature as a phono socket for the video signal input and controls for brightness and contrast. depending on the machine, the software allows real-time capture and display - on the Amiga it's four frames a second. If you have extra memory you can store images in RAM and play back animated sequences.

- ▲ Good low-cost performance
- ▲ Can control hardware from your own programs

▼ Performance dependent on host machine

Value for money ★★★★★

● THE DIGITISER

DATEL • 0782 744707

FOR AMIGA £89.99

FOR ST £79.99 (works in mono and colour)

FOR COMMODORE 64 £79.99

Plugging into a parallel port, the hardware frame grabs at 1/50th second and screen updates one frame per second allowing the software to edit, cut and paste portions of the 16 grey scale picture along with special effects such as reversals and mirroring.

- ▲ Impressive features at the price
- ▲ Single, continuous or buffered display

Value for money ★★★★★

AMIGA

● DIGI VIEW GOLD

HB MARKETING • 0895 444433
£130

This minute digitiser plugs into the parallel port and comes with an accompanying colour wheel which attaches to a video camera for colour grabbing individual RGB signals. Grey scale digitising is also supported and both results are extremely impressive. Saturation, brightness and sharpness can all be controlled.

- ▲ Very impressive HAM mode
- ▲ Features overscan, extra half-brite and line art support

▼ Needs 1Mb
▼ Lengthy scan times

Value for money ★★★★★

calamus
OUTLINE
ART

Hawk Scanners

Augur OCR

Script

Mat Screen

Signum! 2

Imagic

BioNet 100

Style
Publishing Services

Are you looking for a
professional DTP package
?

If the answer is yes then why not give us a call at Style Publishing Services. We now stock all listed hard & software.

This advert was produced using calamus running on an Atari, and output on a Linotype at 1275 dpi for final reproduction.

You will find no other software for the Atari that can give you this quality output.

We are the only UK company that use calamus to provide a professional typesetting service.

All in all there is nothing for the Atari that comes close to calamus, this is why we now fully support calamus and other related software.

calamus
Desktop Publishing

Page Layout / Design

Style will prepare all your documents, proposals, handbooks, catalogues, newsletters and brochures, to the quality and specifications that you require.

Typesetting

Full typesetting service. From business cards and letterheads to multi-page manuals and brochures. Fax service for quick visual proof copies. Output from either laser printer or Linotype 300 photosetter.

Laser printing

The latest in technology is laser printing. Style can now offer this service at a competitive price. All disks containing ASCII files can be accessed and laser printed in a wide range of fonts.

Copy Typing

Using the latest computerised methods, copy typing is now no longer the arduous, time and manpower consuming task it used to be. Typed documents from any typewriter, word processor or printer can be easily and quickly reproduced into an editable and transferable form.



4 Manor Way

Old Woking

Surrey GU24 0EX

TEL (0483) 720090 FAX (0483) 720004

● VIDEONPower Computing
£250

Good quality digitising on a par with Digniview. Software allows image enhancement, zooms, pixelisation and ability to transfer images onto surface of objects generated in art packages. Images of up to 4,096 colours can be captured and multiple images shown on screen simultaneously.

- ▲ Good quality digitisation
- ▲ Can digitise 4096 colours

- ▼ Slow scan rate
- ▼ No frame buffer

Value for money ★★★★★

● DIGI-PICPRECISION SOFTWARE • 081-330
7166
£299

Up to 16 grey scale levels are supported with this impressive hardware which also includes a colour wheel for RGB scanning. Intuition pull-down menus afford easy operation and access to all functions leaving the main screen uncluttered. Software controls include quantisation, contrast, and edge

- ▲ Fast operation
- ▲ Supports up to 32 colours

- ▼ Low-res only

Value for money ★★★

ST**● TURBO-DIZER**SOFTWARE EXPRESS • 021-328
3585
£149

Camera, video recorder or TV pictures can be digitised via the plug-card as colour or grey scale images which can be treated for brightness and contrast. Images can be saved to disc ■ Neochrome, Degas or Art Director format files for subsequent manipulation. Only high-res pictures can be saved for DTP use.

- ▲ Good range of control for the price
- ▲ Excellent results in hi-res mode

- ▼ Slow scan time
- ▼ Animation only possible in lo-res

Value for money ★★★★★

● SAM DIGITISERSTART SYSTEMS • 0304 369364
£249.95

An excellent real-time frame grabber for capturing images in 16 colour lo-res format. Entire sequences can be saved – 10 on a 520, 24 on a1040, 52 on a Mega ST2 – and animations run at variable speed in forward or reverse.

- ▲ Blur-free, sharp frame capture ability
- ▲ Good animation and control

▼ Only operates in lo-res mode

Value for money ★★★

ARCHIMEDES**● REAL-TIME DIGITISER**WATFORD ELECTRONICS • 0923
37774
£249

Billed as the best digitiser for any micro, it provides a fast and flexible means of digitising. video camera, recorder and off-air pictures can not only be captured but treated and manipulated in real-time to a range of effects.

- ▲ High-quality image capture
- ▲ Fast processing and control

Value for money ★★★★★

● I/O PODULEBRAINSOFT • 071-486 0321
£137

Part of a multiple input/output podule that incorporates a sound sampler, ROM sockets, RS232 and joystick interface, the I/O comes on a half height euro-card and can digitise up to 256 levels of grey. Colour is also provided, but can digitise in any graphic mode in any case. Up to two seconds can be scanned in MODE 12 or MODE 15 thus allowing animated sequences to be played back or incorporated into paint packages.

- ▲ Good level of sampling
- ▲ Part of a excellent suite

Value for money ★★★★★

PCW**● VIDEO DIGITISER**ELECTRIC STUDIO • 0462 675666
£99.95

Plugging into the expansion port and accepting either camera or recorder input. The resultant image can be used in any DTP package

- ▲ Auto contrast control

- ▼ Quality not as good as scan

Value for money ★★★

BBC**● BEEB VIDEO DIGITISER**WATFORD • 0923 37774
£114

Up to eight grey scales form pictures can be compressed, stored to disk and output to Epson-compatible printers. On-screen images can be treated as a normal graphic.

- ▲ Unit can be driven from BASIC

Value for money ★★★★★

PHONE
Blandford
(0258) 451347
BUILD IT YOURSELF!
FAX
(0258)
456046
MOTHERBOARDS
XT TURBO 12MHz, V20.
Small size, takes 256k x 4 DIL.
£62.10

AT TURBO
12MHz, baby size up to
4M on board.
£158.00

AT TURBO 16MHz version
£205.00

AT TURBO
with EMS 12MHz, up to 5Mb on
board.
£188.00

386SX ALL-IN-ONE. 16MHz
includes floppy, serial and parallel
ports. Takes 1M x 1
£399.00

Memory ■ available for all these
boards. Please call for current prices

I/O ADAPTORS
SERIAL RS232 £16.10

DUAL RS232 £24.10

SERIAL/PARALLEL/GAME
Com 1, 2, 3, 4, Par 2, 3 Links £14.50

DUAL SERIAL + PAR
+ GAME £25.00

XT SERIAL/PARALLEL/
CLOCK/FLOPPY/GAME £31.50
KEYBOARDS
101 Key XT/AT switch £46.00

101 CHERRY XT/AT £65.50
PC-DIY BOOK

If you are not sure how to go
about building your own PC,
then this is for you! 112 pages
full of practical tips for £7.95
inclusive. (NO VAT)

DISPLAY ADAPTORS
MERCULES plus printer £39.20

DUAL CGA/MERC £38.00

EGA PLUS £99.50

VGA 8 bit £99.00

UNIVERSAL VGA 8/16 bit VGA,
EGA, CGA, MDA, Hercules.
Standard plus 800 x 600 plus
1024 x 768 resolution £137.00
MONITORS
MONO 12" green £73.00

VGA 14" paper white £165.60

VGA 14" colour £389.00

**REMEMBER! ALL OUR
PRICES INCLUDE VAT. CALL
FOR FREE CATALOGUE
DELIVERY £3.00 (under £40)
£9.00 (over £40.00)**

FLOPPY DRIVES

5.25" 360K £66.70
5.25" 1.2M £80.50
3.5" 720K £71.76
3.5" 1.44M £85.58
5.25" cradle for 3.5" drive
adaptor and cables £12.50

DISK CONTROLLERS**UNIVERSAL FLOPPY**

DRIVES 380/1.2/720/1.44 drive
AT and 386 systems £24.50

XT Hard/Floppy controller £81.00

XT Hard disk controller £65.00

AT floppy/hard controller £107.00

CASES AND PSUS
XT/AT
Three 5.25" and 3.5"
slots or disks, flip top lid £44.50

Suitable 180W PSU £44.85

DE-LUXE. With speed
display £65.00

Suitable 200W PSU £69.00

MINI TOWER with
speed display £72.50

Suitable 200W PSU £69.00
BLACKMORE ELECTRONICS LTD

4 The Plocks, Blandford Forum, Dorset DT11 7AA

Telephone Blandford (0258) 451347

WE TAKE ACCESS, VISA AND AMERICAN EXPRESS

**"SKELETON"
SYSTEMS**

These consist of motherboard,
case and PSU. You add the rest!

XT 12MHz £155

AT 12MHz £250

AT 16MHz £305

IBM Software for less

Ventura Publisher 2 ~ £320 (limited stocks)
Paradox 3 ~ £325
Multimate Advantage II ~ £175
Corel DRAW! v1.21b (latest release) - £269

SYSTEM SOFTWARE

MSDOS v3.2 - £29.50 v3.3 - £38 v4.00 - £57
PC Tools Deluxe v5.5 - £73
Disk Technician ADVANCED v6.08 - £119.95
New, the amazing - Microsoft Windows 3 - £89

HALF PRICE SPECIAL - Learn to use DOS OR Learn to use your PC - by Lifetree - either package £10.80

All software is postage FREE Securicor Overnight Add £6

PSION PSALE

Spreadsheet Pack ~ £26.25
Finance Pack ~ £19.65
Maths Pack ~ £19.65
Widget Filemaster ~ £29.40
32K Rampack ~ £37.50

Organiser CM - £53 Datapacks
Organiser XP - £81 8K £8.50 16K £13.10 128K £66

Using & Programming the PSION ORGANISER II (book no VAT) £7.95

AMSTRAD UPGRADES

512Kb to 640Kb upgrade for PC1512 - £18
(state if 18 or 6 IC socket model)

V30 Super CPU 8MHz/z (replaces 8086) - £13.75

Amazing Deal on
AMSTRAD PPC640DD

Free LOTUS SYMPHONY 2
current price £550! £499

Includes:- 2400 Baud
Modem, Carry Case
P.S.U. & Bundled S/W

Legitimate UK Sourced Machines not shady
unsupported imports. Hurry - very limited quantity.

Amiga

Buy directly from
the manufacturer
and save ££££

512K MEMORY

£44.99

Our Incredible TOTAL
price includes the
clock chip & rechargeable
battery.

TOTAL PRICE INCLUDING POSTAGE AND VAT!

In production over 2 years with thousands sold the AMRAM512 is totally
compatible with Commodore A501. Don't confuse it with more costly
and inferior cut-down products. Not available without the clock chip
or battery. TWO Year WRITTEN Warranty.

HARDWARE HEAVEN

Western Digital WD1002-27X RLL XT Hard Disk Controllers ~ £38
Western Digital WD1006SR2 RLL AT Hard+Floppy Controllers ~ £78
Winchester (ST506) 2 Cable Sets - £5
Epson 3.5" 720Kb Floppy Drives - Boxed New - £29.99 **SPECIAL!!!**
Teac 3.5" High Density 1.44Mb Floppy Drives - £49.50
DATRAM dd2000 disk doubler Card
--- a short card that 'Doubles the capacity of any Hard Disk' - £99
Printer Cables, Standard IBM Parallel,
----- all 25 ways, screened, 1.8M - £3.99 each 10 for £30
Genuine INTEL (EMS + Extended) memory boards
----- Above Board AT with 128K (up to 2Mb) ~ £125.
Upgrade your PC/XT clone to a real computer (Norton SI-23):-
20MHz 80286 XT Size Motherboards, AMI BIOS, 640K RAM - £252
Sagenet Local Area Network starter kit, almost half price ~ £175
Amstrad LQ5000 printer - unused - one only to clear at ~ £285

We are a business and trade supplier therefore
(unless otherwise stated) our prices do not
include 15% VAT. Prepaid orders must add VAT
to the price including postage.

We take VISA, ACCESS & STYLE

Items offered subject to availability. 9am - 5.30pm
Mon - Sat

Inpholink Ltd, Front St. West, BEDLINGTON,
Northumberland NE22 5UB - Order Line (0670) 827480



VIZ Trade Co Ltd



COMPUTER PRODUCTS FOR BUSINESS

SPREADSHEETS

Crocker 4 £114.95 inc VAT
VP-Planner £114.95 inc VAT
VP-Planner Plus £172.45 inc VAT
Twist and Shout £49.99 inc VAT
Numbers Up £49.99 inc VAT

DATABASES

VP-Info V1 £114.95 inc VAT
VP-Info V2 £229.96 inc VAT
ContactMate £29.99 inc VAT

INFORMATION CONTROL

Personal Assistant £199.99 plus VAT
Timeslips £69.99 plus VAT
Timeslips Plus £149.99 plus VAT
Navigator £299.00 plus VAT

WORD PROCESSING

Multitractor 2 £114.95 inc VAT
New Word 2 £114.95 inc VAT
Word for Word Professional 4.1 £99.99 plus VAT
(ditto) 3 station network version £149.99 plus VAT

EXPERT SYSTEMS

VP-Expert V2 £229.95 inc VAT
VP-Expert SQL £369.25 inc VAT

DESKTOP PUBLISHING

New Fleet Street Editor £159.99 inc VAT
New Fleet Street Editor/Add on pk £24.99 inc VAT
The Advertisers Collection £29.99 inc VAT

GRAPHICS

Graphic Works 1.1 £99.99 inc VAT
VP-Graphics £114.95 inc VAT
Zing £149.99 inc VAT

UTILITIES

Top Dos 4 £69.95 inc VAT
DS Squeeze £49.99 plus VAT
MacTreePlus/Backup £49.99 plus VAT
Backup Pro £69.99 inc VAT
DS Help £29.99 plus VAT

INTEGRATED SYSTEMS

Secretary Bird £39.99 inc VAT
Mavis Beacon Teaches Typing £29.99 inc VAT

This month's special!

The Software Toolworks
World Atlas
Atlas, Almanac and World fact book in
one, World Atlas gives you instant
screen access to the whole world via
hundreds of colour maps and a huge
international database.

Order direct to: VIZtrade Company Ltd, Spindles, Birchen Lane,
Haywards Heath, West Sussex RH16 1SA
Please send me the products listed in this coupon.

NCE

I am paying for them as
indicated below:

Signed

☐ Access or Visa card (tick)

Expiry date

Card number

☐ or Cheque/PO made payable to Viztrade Co Ltd (tick)

Products

Name

Address

Telephone number: 0444 44 1066
Fax number: 0444 44 1541

How to order: • By telephone or fax (see above)
• By post using the coupon

How to pay: • By Visa or Access card
• By cheque/postal order

Post and Packing £2 per item

SHOPPING EXPRESS READER ADS

There are great bargains to be had in our reader ads section, but remember to check before you buy - we cannot be held responsible for the quality of the goods on offer!

● FOR SALE

AMSTRAD PCW (8256/8512) adventure games. Hitchhikers, Stationfall, Blackstar. Will sell for £12 each, or £30 the lot. Phone Carwyn Cook, (0443) 202429, after 4pm weekdays.

BBC Master compact 128k, colour monitor, 3 1/2" disc drive, mouse, joystick, 10 games discs, books, art package, excellent condition £400. Tel Ian 051 356 3140.

AMSTRAD CPC464 with green monitor, TV adaptor, and software. Has not been used alot, offer to Paul (0294) 67086.

SPECTRUM 48k plus interface one Micro-drive, loads of hardware & software £130 o.n.o. Tel: (0287) 634572 after 6pm Cleveland.

SPECTRUM 48k plus Opus disc drive, loads of software £130 o.n.o. Ring after 6pm. Tel: (0287) 634572 Cleveland.

ATARI 520STFM one meg int. drive, 5 1/4 360/720 ext. drive, PC Emulator (PC Dito), Amstrad 3160 printer, lots of software PC and ST £390. (0403) 67578.

AMIGA A500 joystick, Datalink lead, about

40 discs, £330, 11 months old. Tel: 041 339 4719.

ATARI 520STE, Panasonic KXP1124, printer both 4 months old. Plus Firstword Plus v3, Flight Sim 2, Hard Drivin', joystick, etc. Worth £750 sell for £450. Tel: (0603) 745023.

DISPOSING of ST games from £3 SAE for list to: Charles, 23 Nottingham Court, St. Johns, Woking, Surrey, GU21 1TH.

IBM sys34 (£35) 128kb available 1/6/90 offers - Essex (0702) 588655 over 500 DSD 8" diskettes offers (0702) 588655.

DATTEL Amiga Digitiser unused and boxed, complete with power supply. Cost new £90 accept £50. Telephone Leeds 562746.

LAPTOP computer IBM compatible, 10mb hard disk, 3 1/2" floppy serial and parallel ports upgradeable to 1024k internal RAM, plus some software. Offers around £650 (0243) 585203.

PC compatible 30mb h/dive £99, f/disc controller £17, IBM EGA card £69, printer/mono card £25, mono monitor £10, 130w PSU £25. 081 594 6255 evenings, weekends.

MORRISON Romboard for Amstrad CPC includes Pascal Rom but no Pascal manual

£15. Jones, 2 Town Mead, Oakford, Devon, EX16 9EW (03985) 438.

ATARI hybrid arts £2 - Score Plus midi program, cost £159. Sell for £90 (original) Tel (0532) 797967. Leeds.

5 14" internal disc drive, 340k IBM compatible for sale, almost new, sell for £40. Phone Frankie on (0533) 550367 Leicester.

FOR sale ZX Spectrum +2, 128k, Multiface 128, £200 of games, joystick, leads, books, magazines, worth £375, extras RS232 to Centronics interface £19, Art Studio 128, £14. Tel (0656) 650597 after 4pm.

MSX Toshiba HX-10, small printer, joystick, cassette recorder, leads, manuals, magazines and games plus accessories, very good condition, sell £100 o.n.o. Tel: 051 632 3939.

AMIGA software for sale - 11 originals in very good condition will consider swap SAE to: Rob, 30 Society Court, Society Lane, Aberdeen, AB2 2DE for list.

ATARI 520STFM over 100 games, dust cover, Art & Film Director, DGCalc, Fleet Street, STOS, STAC, First Word+, Flair Paint worth £1500, £700. Phone 021 544 7633.

CBM64, 1541 disc drive, MPS801 printer, 1701 colour monitor, modem, Easyscript, Future Finance, Basic 1+2, more software plus books, £400. Tel (0428) 576292 after 5pm.

BROTHER HR5 printer with Tasword 2, £35; Alphacom printer 32, £30; Omnicalc 2, £5. Data Genie, £4; Spectrum with elektro and editor, £15. (0258) 880394.

IBM PC, original, twin floppy, 512k, mono monitor, pure IBM, never modified in any way. First £350.00 Phone (09073) 64147 after 6.00pm.

AMIGA A500, loads of top software, 80+ blank discs, as new, could be given as pre-

sent etc. Phone (0454) 312135, make an offer, after 7.00pm.

CBM64 (needs attention), 154 D/D, MPS 803 printer, datasette, mark 4 cartridge, joystick, softwares, manuals and magazines. Phone Amar 021 565 3153. Buyer collects £350.00.

FOR SALE: A500 + kick off + Star colour LC10 printer + second drive, will deliver anywhere (EEC) £350. Tel: (0823) 284819.

ATARI STFM 1mb plus 35 software titles incl. "Midwinter" good condition £260. Tel: (0702) 546685 after 6.30pm.

SYNCHRO Express (Amiga version). Software and hardware backup utility as new, £18.00. Tel (0922) 743068, pm.

COMMODORE 128D computer built-in disk drive, over 100 floppy disks, 3M branded plus manuals, dust cover and joystick, wordprocessors etc. All as new - phone (0274) 679251.

BBC Z80 second processor for sale with disks and manuals Wordstar, Accounts etc. £110 o.n.o. Tel: John (0302) 538042 evenings or weekends.

AMIGA software Platinum Scribble (wp) £30, Textcraft (wp), Superbase, K-Spread, Hi-soft Devpac, D-Point £15 each. Compute's machine language programming book £10. All original packaging, used only once. Cleveland (0642) 784539.

BBC Advance disk investigator and advance disk tools Roms with manuals as new £30.00 each, offer price £17.00 each. Telephone John (0302) 538042 evenings.

ATARI 130XE D/D 1050 disc drive, lots of software and magazines worth £300, £160 o.n.o. Stevens, 6a Lydford Road, Paddington, W9 3LU.

EPSON MX80 mkIII printer, v.g.c. original box plus BBC cable £100 o.n.o. Ring (0703) 771607 evenings (Southampton).

LAUNCH into the nineties, a new decade of BARGAINS!!

OFFER 1:

Double Sided 3 1/2" Disks, Individually Wrapped, 880k 135 tpi, ideal for Amiga, ST, etc. Blue, Pin No., made in Japan. 100% Error Free. 2 for 1 Warranty or money back.

10 x 3.5"	£4.90
25 x 3.5"	£11.95
50 x 3.5"	£20.50
100 x 3.5"	£40.00
250 x 3.5"	£98.00
500 x 3.5"	£195.00
1,000 x 3.5"	£350.00

OFFER 2:

Genuine Sony 3.5" Disks Double Sided, made in Japan, sold in Sony outers, probably the best disk in the World!

10 x 3.5"	£5.90
25 x 3.5"	£14.35
50 x 3.5"	£26.48
100 x 3.5"	£49.78
250 x 3.5"	£123.95
500 x 3.5"	£238.00
1,000 x 3.5"	£463.00

OFFER 3:

5.25" Double Sided 48/96 tpi for IBM PC and Clones, etc. 100% Error Free, 2 for 1 warranty or money back.

25 x 5.25"	£6.95
50 x 5.25"	£14.95
100 x 5.25"	£24.95
250 x 5.25"	£59.95
500 x 5.25"	£129.00
1,000 x 5.25"	£200.00

Complete with labels, envelopes & w.p.'s

OFFER 4: High Density Disks.

when only the Very Best will do
5.25" HD 1.6mb
for IBM, AT, Etc.

3.5" D/SHD 2mb
made in Japan.
HD in corner of Disk.

10 x 5.25" HD	£4.60	10 x 3.5" HD	£11.00
25 x 5.25" HD	£11.00	25 x 3.5" HD	£27.25
50 x 5.25" HD	£21.50	50 x 3.5" HD	£54.00
100 x 5.25" HD	£42.00	100 x 3.5" HD	£94.72
250 x 5.25" HD	£100.00	200 x 3.5" HD	£178.00
500 x 5.25" HD	£197.00	500 x 3.5" HD	£425.00

Including Labels,
Envelopes & w.p.'s

100% Error Free. 2 for 1 Warranty

OFFER 5: 'Keep your data safe'

Top Quality Anti Static Lockable Disk Boxes, complete with 2 keys. Small or Large Capacity, ideal for Home or Office use!

3.5" x 40 Capacity	£3.50
3.5" x 80 Capacity	£3.95
3.5" x 100 Capacity	£4.95
3.5" x 125 Capacity	£3.50
5.25" x 70 Capacity	£3.95
5.25" x 100 Capacity	£3.95

OFFER 6: Accessories:

Sourced from the world's leading manufacturers. Quality and Price Guaranteed. Buy with Confidence

Amiga/ST dust covers	£1.95
Universal Screen Filter	£14.95
3.5" or 5.25" Cleaning Kit	£1.95
Mousemat	£1.95
200 Labels	£2.99
Roll of 1,000 Labels	£7.50
PC or Amiga Cable	£5.95
Mouse House/Bracket	£2.40
Printer Stand with Tray	£13.99
Printer Stand	£11.95
Mouse/Joystick Extension	£3.95

Four good reasons for choosing Original Media as your Supplier.

1 No Minimum Order

2 Access and Visa accepted

3 Next Day Delivery

4 Free Helpful Advice

(order placed before 12.00 a.m.)



Post add £3.50 per order.
Never mind the cost!

CORPORATE
EDUCATION &
TRADE ENQUIRIES
WELCOME

THE ORIGINAL
MEDIA

COMPANY LTD
TEL: (0530) 810000
(8 LINES)
FAX: 0530 813595

Dept NCE
14 ASHBY RD
COALVILLE
LEICESTER
LE6 2JA

SMARTWARE II brand new, not registered 3.5 disc sell £325 o.n.o. Phone Tony (0784) 256928 evenings. Only one copy for sale.

DATA Recorder (tape) specially made for computers of most makes. Brand new (boxed) battery or mains (via adaptor not supplied). Gift at £10+ p&p. (0923) 246318.

SPECTRUM games (48k). Believed unissued, bought with hardware, job lot ex-ings, bankruptcy. Quantity each: "Travel with Trashman", "Custard Kid" and others, value £70p + p&p each. (0923) 246318.

ATARI 850 modem and printer interface £40 o.n.o. Clive disc drive and interface £70 o.n.o. M. Stevens, 6a Lydford Road, Paddington, W9 3LU.

LOOK!! Amiga No. 1 hit! "Hard Drivin" £5.99! Also "Fun School 2" all ages only £8.99 each! STOS games creator £9.99 all software originals, boxed etc. Tel: (0274) 664871 after 8pm.

PSION Organiser Spreadsheet for XP or LZ models £20 o.n.o. or may swap for travel or games pack. Ring Richard (after 6pm.) 061 485 6580.

AMIGA games: Hostages, Kult, Purple Saturn Day, £5 each or may swap for demos or adventure games. Ring Richard after 6pm 061 485 6580.

AMSTRAD CPC6128 colour monitor, disk drive, data recorder, multiface 2, joystick, games, magazines, books, excellent condition. For details phone (0384) 66825.

YAESU FRG-7700 communications receiver 0-30Mhz, digital display/clock/timer/alarm, fine tune, 12 bank memory, v.g.c. £350.00. Paul Smith, 54 Musgrave Road, Shirecliffe, Sheffield, S5 8WP.

TRADE! Wembley Eclipse Air Rifle + scope for Megadrive or PC Engine. Worth £250. Call Daniel on (0372) 720841.

FOR sale £200 of original software, 100's of magazines, 2 programming books £60 the lot! New games like Blood Money. (0656) 650493.

ATARI 520STFM, hi-res mono monitor, vid-ST digitiser, Hi-soft Power Basic, Hi-soft Assembler, Fast Basic, loads of manuals and magazines. Will split, £420. Peterborough (0733) 269959.

SWAP Mega drive with top four games (Pal) for one meg Amiga (1.3) no games needed, just the basic package. Phone Cecil on 081 534 7567.

EPSON high res. CGA colour monitor, plus card, includes games, printer and mouse ports, only £110 for quick sale. Tel: (0895) 53970.

ACORN Electron 3.5" disc system, expansion interface, 4 yrs of mags, many games, discs, programs: offers around £225. Write to: Mr. P. Randal, 7 Mains Avenue, Helensburgh, Scotland, G84 8QW (near Glasgow).

SPECTRUM mega sale, hardware/software, loads of games and gear. Write for huge list - P. Wilkinson, 5 West Royd Grove, Mirfield, West Yorks, WF14 9LW. Do it now!

TWO 48k Spectrum PCB's. Non-working with suspected regulator faults. Working RAMS £30.00 Details: P. Rafferty, 36 Burnside Gardens, Kilbarchan, Renfrewshire, Scotland, PA10 2HQ. Telephone (05057) 5489.

CPC6128 colour plus lots software, boxed, perfect £275 o.n.o. C. Command £6.00 (disc), S. Service Gunship, F15, Guild of Thieves £5.00 each, Leather Goddesses £17. Phone (0489) 789705 (Steve) after 6pm.

48K Spectrum with Opus Discovery disk drive & lots of software £120 or swap for ST software/peripherals. Eamon Tighe, Cappagh, Barna, Galway, Eire. Phone 010 353 9125431.

CASIO HT-700 keyboard, midi in/out, stereo,

4 octaves, mini keys, pitch bend, box and carrying bag. Perfect condition only £85. Tel: (0253) 882932 (Blackpool area).

CBM64 128 games lots and lots, disks and cassettes. Selling up, for list ring 081 206 0851, Harrow.

ATARI 520ST, games, accessories, low mileage, only £200 including Yamaha PSS470 synth or £185 without, synth only £51 o.n.o. Both v.g.c. Phone after 8pm (0227) 464881.

AMSTRAD LQ5000 dot matrix printer £300, absolutely brand new, still under guarantee, not suitable for my purpose. 061 787 8501.

ATARI STFM 1meg memory, 1mb drive, over £500 of games, art progs, and utilities. Excellent condition £350 o.n.o. Tel: 041 882 4579. Paisley area.

CPC Datacorder + tape software £250.00 (inc. P&P) AMX Stop Press and mouse £45.00 FD1 second drive £60.00 Microspread Microword + Microfile £20 (total) Phone (0489) 789705 after 6pm (Steve).

PENPAL wp for Amiga (1mb), colour display, printouts, DTP functions, IFF imports, 100,000 wordspell, plus multitasking database. Mint, £65. Boxed original. John (0273) 588705.

SEGA system with 12 games, boxed in superb condition, worth £400. Offers around £200 or swap for Amiga A500 + games. Phone John (0532) 695615 after 6pm.

CBM64, Oceanic d/drive, MPS803 printer, C2N tapedeck, Simons Basic, Power Cart., joystick, tapes, discs, leads, manuals, spare ribbons + mags. Excellent condition £315 o.n.o. Tel: (0724) 863053.

AMSTRAD CPC cassette originals for sale. Very cheap, including Microprose Soccer, Gryzor, Four Soccer Sims, etc. Write to: 19 Sherwood Drive, Skellow, Doncaster, DN6 8NY.

FOR sale 520STFM 1meg drive, mint condi-

tion, 1 year old, must be seen, 10 discs of demos + joystick, £160, must be able to collect. Tel: (0734) 788085.

AMIGA 500, KS1.3, 5 months old, c/w mouse, P.S.U., disks, manuals, DPaint, Superbase Personal, Home Account, Virus Killer, Weird Dreams + games, under warranty £340 (0224) 824904.

UNUSED computer magazines worth £30 plus 6 free ST Format games disks. Will sell for £20. For more details call (0384) 378969 after 6.15pm weekdays, ask for Steven.

ALPHACOM 32 line printer for sale £50, includes 3 rolls of paper. Also Multiface 1 for sale £20. Both for Spectrum 48k. Telephone: John (0786) 70553.

ATARI 520STFM with £300 worth games inc. Hard Drivin', Robocop, sell for £180 - phone Mark Lightfoot, 051 608 7137 evening, 051 630 5577 daytime.

COMMODORE 64, manual, two joysticks, tape deck, approx. 50 games with storage case, £150 o.n.o. Tel: Todmorden (0706) 815877 evenings please.

CBS colecovision video game system, accessories ie roller controller, Atari interface, etc. Over 46 games £220 o.n.o. (0993) 851155.

FOR sale: Spectrum + 3 computer, Lightgun, over 200 tape games, tape recorder, loadsa programming books, joystick, all for only £300. Ashley, 33 Bideford Crescent, Knowle, Bristol, BS4 1HE. Buyer collects.

14" colour monitor for sale, brand new, still boxed r.g.b. compatible with all Sinclair Amstrad computers and most others £80.00 only. Phone (0753) 40534.

EINSTEIN computer single drive, Spectrum Emulator, Wordpro, Scrabble, games, books, manuals, £100. Tel: (0429) 871130 after 6pm.

TOTAL DISTRIBUTION (UK)

245 LONDON ROAD, STOKE-ON-TRENT, STAFFS, ST4 5AA

All following prices are inclusive of VAT and Delivery

PRINTERS

stair

LC-10	£145.00
LC-10c	£190.00
LC24-10	£231.00
XB24-15	£594.00
Laser 8II	£1150.00
Laserjet II	£1249.00

MONITORS

14" mono	£65.00
14" EGA	£250.00
14" VGA	£270.00

DISPLAY ADAPTORS

Mono	£40.00
EGA	£80.00
VGA	£100.00
(16 bit)	£120.00

PRINTER CABLES

1.5M	£6.00
3.0M	£7.00

MICE

3 Button, rollerball£35.00

PC SOUND BOARDS

Adlib	£149.00
Sound Blaster	£179.95
Roland LAPC-1	£379.00

A large selection of software is available

Tel: (0782) 744051
Fax: (0782) 747264

We accept:
VISA, ACCESS & EUROCARD

Allow 7 days for delivery

Prices for machines are exclusive of VAT & delivery

XT'S
AT'S
386

MONO, SD, 10MHZ £380

MONO, SD, 16MHZ £450

MONO, TOWER, 33 MHZ £1690

sinclair QL

EEC LTD MAIN SUPPLIERS OF Sinclair QL COMPUTERS & LOW COST PRINTERS. QL FROM £90. PRINTERS FROM £80.

THE EXPANDABLE SYSTEM FOR SMALL BUSINESSES, BEGINNERS, AND EXPERTS QL COMPLETE, Fully tested and with 3 months warranty.

TV lead, QL software 2.35, Also complete bound user guide for the QL, Superbasic, & for the software: Quill - Word Processor, Abacus - Spread Sheet, Archive - Records, Easel - Business Graphics.	JM ROM	£120
	JS ROM	£135

CUSTOMERS BUYING ONE OF THE COMPLETE UNITS ARE GIVEN ONE YEAR'S FREE MEMBERSHIP TO QUANTA (Help, Newsletters, & 400+ Library Programs - most free). QUANTA MEMBERS CAN OBTAIN A 15% DISCOUNT

BACKUP QL The QL with power supply unit, & TV Lead. Keep it as insurance, or for networking. Cheaper than changing to another system.	JM ROM	£90
	JS ROM	£100

☆ SPECIAL ITEMS ☆

1 Mb 3.5" Disk Drive Unit, NEC FD1036A with black front bezel	£49
Tandata Modems, Q-Mod, Q-Connect, £15 ea, Q-Call, £25, or the set	£40

Easy-To-Use range of business software also utilities see below.

ACCESSORIES & SPARES

QL Psion software 2.35 pack	£20	or Separate Programs each	£10
Complete Bound User Guide	£7	QL Power Supply Unit	£12
Joysticks	£9	Centronics Interface	£24
MC 68008 Microprocessor	£8	Serial Printer Lead	£12
Keyboard Membrane	£9.50	ZX 8301 or ZX8302 each	£9
Cartridges, Waikets of 4, new	£12	4 Unused prog cartridges	£9

20 New cartridges in plastic storage box £55.
SOFTWARE QL Cash Trader, Decision Maker, £18 ea. Touch & Go (Typing Tutor), QL Games cartridge, £9 ea. Q-Liberator SuperBASIC COMPILER (Disk) £60. Q-Liberator budget version (For MDV) £30. QLOAD SuperBASIC QUICKLOADER with QREF PROGRAMMING UTILITY £15.

BUSINESS SOFTWARE (Suitable for standard QLs) Small Traders Pack £24.95. Invoicer £19.95. General Ledger £19.95. Set Three £50. Mail Merger £14.95. Filer Pack £14.95. Also Stock Accounting £39.95 (For Expanded QLs). Send S.A.E. for Software leaflets, or phone.

SEIKOSHA GP100A PRINTER, Dot Matrix, Centronics, 50 cps, Graphics, Tractor feed, Centronics interface £20, if bought with printer. £80

C. ITOH DAISYWHEEL PRINTER Serial. Prints at 20 cps. Can print 1 + 3 copies. Paper width 13ms. Chars per line: 115, 138, or 172. Selectable on top panel. Buffer 256 bytes. Obtainable extras: Centronics module, 2-col ribbon, tractor, & auto sheet feeder. £140

Interchangeable plug-in interface modules for Star NL-10 printer. Serial, Parallel/Centronics, IBM/PC, or Commodore

Serial, Parallel/Centronics, IBM/PC, or Commodore each £20
TERMS CWO, ACCESS or VISA.
Minimum order £9. P & P £6.00 for printers & QL (Overseas £15).
Other items £3 (Overseas £6)

EEC LTD

18 - 21 Milsbourne House, Chiltern Hill, Chalfont St Peter, Bucks, SL9 9UE. Tel: 0753 888866. Fax: 0753 887149 (AD1)

ATARI LYNX

Atari Lynx Games Machine **only £164.00**
(with free California Games card) **inclusive**

Lynx Game Cards

BLUE LIGHTNING £22.00
CHIPS CHALLENGE £22.00
ELECTROCOP £22.00

Lynx Game Cards

GATES of ZENDOCON £22.00
GAUNTLET III £25.50
RAMPAGE £25.50

CITIZEN Swift 24

SWIFT 24 ACCESSORIES

Colour Upgrade Kit £34.95

Black Ribbons (ea.) £3.95

Colour Ribbons (ea.) £13.95

- * 24 Pin Printer
- * 102 cps draft
- * 64 cps LQ
- * Epson LQ compatible
- * IBM compatible
- * Nec P6+ character set
- * 5 resident LQ fonts
- * 80 column

- * Tractor feed
- * Single sheet feed
- * Parallel interface
- * Supplied with lead
- * 7 Colour option available extra
- * Beats LC24/10 II
- * RRP £447.35

£310.00

INC VAT AND DELIVERY

Panasonic KXP1124

- * 80 col, 24 pin printer
- * 160 cps, 53 cps NLQ at 10cps
- * 192 cps, 63 cps NLQ at 12cps
- * Adjustable push/pull tractors
- * Front, rear and bottom feed
- * 10, 12, 16, 17, 20 cps + proportional
- * Front panel control
- * 2 draft, 5 NLQ fonts standard
- * Paper Parking
- * A4 Landscape and Portrait
- * Epson LQ/IBM Pro compatible

£255.00

Inc VAT and delivery

THE ATARI PORTFOLIO

Atari Portfolio Pocket PC	£229.95
Smart Parallel Interface	£38.00
Smart Parallel Interface - with parallel cable	£39.95
32K Memory Card	£46.75
64K Memory Card	£82.95
128K Memory Card	£110.00
Finance Software Card	£47.50
PC Application Software	£47.50
Utilities Software Card	£47.50
Serial RS-232 Interface	£56.95
Super Memory Expander	£164.95
Portfolio Card Drive	£67.50
Mains Power Adaptor	£11.99

Star

Genuine Star LC10 Ribbons...

1 x Black Ribbon	£3.50
5 x Black Ribbons	£16.95
10 x Black Ribbons	£32.95
1 x Colour Ribbon	£8.50
5 x Colour Ribbons	£24.95
10 x Colour Ribbons	£47.95

LC10 PRINTERS

Star LC10 Mono £169.00
Star LC10 Colour £219.95

All prices include cable, vat and delivery

ATARI ST PERIPHERALS

Atari SM124 Mono Monitor	£99.99
Atari Megafile 30 Hard Disk	£449.95
Atari Megafile 44 Removable HD	£849.99
Atari Megafile 60 Hard Disk	£619.95
Atari SLM804 Laser Printer	£1115.00
Atari SLM804 Toner Cartridge	£37.50
Atari SLM804 Replacement Drum	£159.99
Philips 8833 Stereo Colour Monitor	£259.95
Cumana 1 MB External Drive	£89.95
Microtime External Clock Card	£24.95
ST Monitor Switch Box	£14.95
STE Stereo scart lead	£12.99
STFM scart lead	£9.95
Metacomco ST Basic Language	£7.95
Replacement internal STFM/E PSU	£99.95
Trakball (Mouse/Joystick)	£24.95
Joystick/Mouse extension lead	£4.75
Replacement ST Mouse cable	£3.75
Parallel Printer Lead	£5.95
14 Pin Din Plug (ST disk drive)	£2.25
14 Pin Din Socket (ST disk drive)	£2.95
13 Pin Din Plug (ST Monitor)	£1.95

AMIGA ACCESSORIES

512K Ram Upgrade with clock	£59.95
A590 20Mb Hard Disk Drive	£379.95
Philips 8833 Stereo colour monitor	£259.95
Cumana External Amiga Drive	£75.00
Vidi Amiga Video Digitiser	£99.99
Deluxe Paint Version 3	£59.95
Photon Paint Version 1	£9.95
Photon Paint Version 2	£39.95
F-29 Retaliator by Ocean	£17.95
Tenstar Games Pack	£34.99

NEED A NEW MOUSE ?

Contriver Replacement Mouse
£27.50 (available for ST or Amiga)

Naksha Replacement Mouse
£36.99 (fits ST, Amiga & Amstrad PC)

Commodore 1352 Mouse
£34.49 (fits Amiga or Commodore PC)

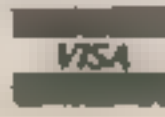
BLANK DISKS

All of our blank disks are guaranteed and supplied with labels. Our 3.5" Unbranded disks are either KAO or Sony. All Sony Branded disks are boxed and supplied with labels (all Sony 5.25" disks are supplied with write protect tabs). All disk prices include vat and delivery.



QUANTITY	10	20	30	50	100	200	250	300
UNBRANDED 3.5" DS/DD	6.50	11.99	16.99	27.50	52.99	96.99	115.00	134.99
SONY BRANDED 3.5" 2DD	11.50	21.50	30.50	50.00	95.00	188.00	230.00	275.00
UNBRANDED 3.5" HD	14.95	27.95	39.95	59.99	115.00	225.00	279.95	330.00
SONY BRANDED 3.5" HDD	27.50	53.00	77.00	120.00	235.00	460.00	570.00	680.00
UNBRANDED 5.25" 360K	3.25	6.25	9.25	14.95	27.50	52.50	65.00	77.50
SONY BRANDED 5.25" 2D	7.95	15.50	22.50	36.99	69.99	135.00	165.00	189.99
SONY BRANDED 5.25" HDD	12.99	24.99	34.99	56.99	99.99	195.00	235.00	275.00

BEST PRICES, (Dept NCE), Unit A, Grafton Place,
Worthing, West Sussex. BN11 1QX
Tel : (0903) 700714



SEE ENERGUMENICAL OPPOSITE PAGE FOR MORE DETAILS

ST MIDI

LATEST and ORIGINAL versions !!

C-Lab Creator SL V2.2

C-Lab Notator SL V2.2

C-Lab Unitor

C-Lab Export

Steinberg Pro 24 V3

Steinberg Cubase V1.5

Steinberg Voice Editors

Digital Muse Virtuoso

Digital Muse Prodigy

FM Melody Maker

other packages available.

RING TODAY -
LATEST
VERSIONS IN
STOCK AT
AMAZING
PRICES!

DR.T TIGER CUB

now in stock !

RING NOW FOR THE LOWEST PRICE !

ATARI STE

520STE 512K RAM	£329.00
520STE 1MB RAM	£379.00
520STE 2MB RAM	£469.00
520STE 4MB RAM	£599.00

All STE computers come with 3 software titles:

First Basic, Music Maker and Organiser.

All STE computers are checked prior to despatch and all prices include VAT and 3 working day delivery by courier.

STE RAM KITS

DIY 1 KIT - 520STE to 1MB (2 x 256K cards)	£39.99
DIY 2 KIT - 520/1040 to 2MB (2 x 1MB cards)	£139.95
DIY 4 KIT - 520/1040 to 4MB (4 x 1MB cards)	£279.95

All RAM prices include VAT and delivery.

ATARI STFM POWER PACK

★ Atari 520STFM computer

★ 20 top selling games (Afterburner, R-Type, Gauntlet 2, Super Hang On, Space Harrier, Star Glider, Overlander, Super Huey, Pac Mania, Nebulus, Eliminator, Predator, Xenon, Bombuzal, Bomb Jack, Double Dragon, Black Lamp, Out Run, Star Goose and Star Ray)

★ Mouse, Joystick and Instructions

ALL THIS FOR ONLY

£299.00

including vat and 72hr delivery

HYPER PACK

Hyper Paint, Hyper
Draw and Borodino
only

£14.95

inclusive

DISCOVERY SOFTWARE

First Basic, Carrier
Command, Neochrome,
Space Harrier, Outrun,
Bomb Jack, STOS and
ST Tour only

£24.95

inclusive

AMIGA A500 BATMAN PACK or FLIGHT OF FANTASY

- ★ Commodore Amiga A500 computer
- ★ Television modulator + mouse
- ★ BATMAN game
- ★ NEW ZEALAND STORY game
- ★ F-18 INTERCEPTOR game
- ★ DELUXE PAINT 2 graphics software
- ★ and full instructions

ALL THIS FOR ONLY

£ 365.00

inc vat and 3 day courier delivery

AMIGA A500 CLASS OF THE 90's PACK

- ★ Commodore Amiga A500 computer
- ★ TV modulator, mouse, mat & 10 disks
- ★ MIDI interface & DrT MRS software
- ★ Superbase Personal Database
- ★ Publishers Choice DTP software
- ★ Maxiplan spreadsheet, Amiga Logo
- ★ BBC emulator, Deluxe Paint 2

ALL THIS FOR ONLY

£ 539.00

inc vat and 3 day courier delivery

A500 BASE PACK

- ★ Commodore Amiga A500 computer
- ★ Modulator, Mouse + instructions

ALL THIS FOR ONLY

£ 349.00

ST GAMES ONLY £2.00 EACH ?

Afterburner, R-Type, Gauntlet 2, Super Hang-On, Space Harrier, Star Glider, Overlander, Super Huey, Pac Mania, Nebulus, Eliminator, Predator, Xenon, Bombuzal, Bomb Jack, Double Dragon, Black Lamp, Out Run, Star Goose and Star Ray

All of the above games are available in the Power Pack Software pack for only

£34.99

that's less than £2.00

each ! (requires double-sided disk drive)

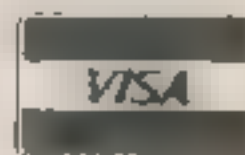
BEST PRICES

(DEPT NCE), UNIT A, GRAFTON PLACE,
WORTHING, WEST SUSSEX. BN11 1QX



(0903) 700714

YOU CAN PLACE YOUR ORDER 24 HOURS A DAY



All prices include VAT and delivery unless otherwise stated. Goods despatched same day whenever possible.

All prices are subject to change without notice. BEST PRICES only supply original equipment and not grey imports. All of our equipment is fully guaranteed. Call us today for prices on any items not listed - we will give our BEST PRICES.

Mail order only, callers and collections only by prior arrangement with us. Thank You.

ALL PRICES INCLUDE UK DELIVERY UNLESS STATED

ADD £5.00 INC VAT FOR NEXT WORKING DAY DELIVERY, ADD £10.00 INC VAT FOR SATURDAY DELIVERY
ADD £10.00 FOR AM WEEKDAY DELIVERY, ADD £15.00 FOR 72HR COURIER DELIVERY TO N.IRELAND

BBC model B data recorder, all leads, joystick, manuals, books, ninety games £220 o.n.o. (0993) 851155.

GOOD C65, 2 datacoders, 1 professional joystick, approx. 100 original worthwhile games, loads of magazines and cheats. Bargain at £130, call Peter at 031 339 8550.

ATARI 1040STFM, 1 yr old and colour monitor, lots of software & games competition, joystick. Will split + modem £325, computer £125, monitor £30, modem. Adrian (0453) 766242.

ATARI 520STFM with 1mb drive plus mouse, joystick and over £700 worth of software including Rainbow Islands, X-Out, Ghouls 'n' Ghosts, Supercars, New Zealand Story, Xenon II etc. A bargain at only £290 o.n.o. Phone 081 907 6144 after 7pm.

SPECTRUM professional adventure writer £8, Fuller Orator and Kempston joystick interface £5 each, Phone (0934) 838182.

SPECTRUM software for sale. Over 80 originals, over 80 mags, including Crash, Your Sinclair etc... Also books, micro-switch, joystick + interface and tape recorder, Phone (0480) 64634.

SPECTRUM 48/128k software, 23 titles including Salamander, Shinobi, Barbarian II, Leaderboard, Op. Wolf, Games Crazy and Last Duel. All in excellent condition, some not used! Only £40. Tel: (0782) 48335.

48K ZX Spectrum and software £40. Phone (0247) 458101 - ask for Dominic.

BBC B, Spec+2, CBM64 systems for sale £375, £200, £80 respectively. (0933) 73484. Ask for Gareth, Casio CT650 midi keyboard, 465 sounds, boxed £150 o.n.o.

BBC B, DFS, DDrive, Lpen, joysticks, printer, ROMS, 2 mice, disks etc. £375 o.n.o. (0933) 73484, ask for Gareth. Also CBM 64, PSU etc. £80 o.n.o. same number.

+2, I/F 1, Lpen, Roboteck, 2 I/F's, Amp, ZX printer + other bits & bobs, 100's games + serious + 100's mags £200 o.n.o. (0933) 73484 ask for Gareth.

CBM64, modem for sale compatible with compunet £25. Contact Barry anytime after 6.30pm + phone (0635) 72354.

CBM64, original games from £2.00 to £8.00 each. Many titles, SAE for list: Barry Bellinger, 20 Mersey Way, Thatcham, Newbury, Berks, RG13 3DL. Phone: (0635) 72354.

CBM64, Simons Basic £12. Basic part 1 £5. Music Composer £10. Machine Code Tutor £10. Touch Type £5.00. Artmaster £8. C2N Head Alignment £6.00. (0635) 72354.

WORDSTAR v5.5 new not been used, still with warranty card, ideal for IBM compatibles £150. Tel: (0302) 538042, John.

PC parts, 5 1/4" floppy s/s 40TK £20, 10mb hard disk £50, serial i/face £10, CGA i/face £20. Tel: Bidford (0789) 772868 Midlands.

SINCLAIR ZX81, printer, 16k RAM, full programming tutorial course, books, games, tapes incl. Flight Sim, cassette deck, £35 the lot. Bidford (0789) 772868 Midlands.

AMIGA X-Copy v2.1, new, £15. Home Accounts £14. Superbase Personal £20. Deluxe Paint III £10. Virus Killer £6. Weird Dreams £7. Gold Hits £7. After 6pm (0224) 824904.

SPECTRUM +2 (grey) with approx. £300 software, joystick, interface, still in original box, £100. Phone: (0278) 652558 between 2.30pm and 6.30pm.

FIVE Amiga games: Goldrunner, Hellbent, Backlash, Soccer, Quadrant, only £5 each. Phone: 081 653 6771.

SPECTRUM 48k plus, interface one, three microdrives, carts, Tasword, three Tasprint,

Ramwrite, Ramprint, cassette player, games and boxes £165. Tel: (0287) 34572 after 6pm (Cleveland).

AMSTRAD CPC464 colour monitor plus 12 games plus desk, little used £195.00, no reasonable offer refused. Tel: Polegate 2880.

ST games: £6 each: Robocop, Barbarian II, Thunderblade, Double Dragon, Super Hang-On, Afterburner II, Dominator, International Soccer, original boxed with instructions. Bernard (0423) 500181.

Z88 128k RAM, 128k Eprom, PCLink, ZTerm, XOB disc drive system, cables, misc. £400. No offers. Tel: 081 871 0351. Very good condition.

ATARI STFM 512K, Fleet Street Publisher, Lattice C, Habawriter, Degas, etc. books, magazines. for £390 o.n.o. Tel: (0438) 86531. Apple Mac 512KE, 2M memory external disk drive, Imagewriter II, Works, Excell, Basic etc. £1275 o.n.o.

SPECTRUM software, Artist II, Icon Graphics 128, White Lightning, Graphic Adventure Creator, Gunship 128, Paint Plus, Southern Belle. All originals, £45 only. Tel: 041 881 5429.

DATL Genius mouse for ST, excellent condition, hardly used £25, buyer collects. Tel: 041 881 5429 for details.

1MEG Amiga 500, 2nd disk drive, 48 original games, mouse, joystick, TV modulator, mags + books, worth £2000, sell for £450 o.n.o. Phone Darren on (0430) 440735.

CBM4032 business computer with monitor, 8050 twin disks, 4022p printer, ideal enthusiasts, beginners offers around £150. Buyer collects. Tel: Glasgow 041 649 5569 daytime.

AMIGA originals for sale: It Came from the Desert £15, Double Dragon £10, both games are unopened, unwanted presents. Tel: 041 887 0536.

ZX Spectrum 48k, excellent condition, includes tape player, interface and 45+ games, price £50. Tel: (0372) 278263, after 6.30pm.

AMIGA A500 with 1Mb RAM, 12 original games, joystick, mouse, modulator, 10 blank disks, £300. Tel: Bolton (0204) 55978.

I've got an AMAS Amiga stereo sampler & midi interface and it's not needed anymore, offer me £50 and its yours. Tony 071 928 8681 ext 410 9am-5pm.

I've got a Scart PC-Engine with 3 games and I'm bored. Offer me £150 and its yours call Tony on 071 928 8681 ext. 410 9am-5pm.

COMMODORE 64/128, 1570 disk drive, 1701 colour monitor, joystick, games, utilities, disks, books, connections, boxed, £360 o.n.o. (worth £800+). Call Andrew (0492) 879026 (9-5).

AMSTRAD CPC6128, 128k, disk, colour, personal computer with green screen monitor, joystick, over 20 games, including Robocop, with manual worth £460 will sell for £170 o.n.o. Phone (0742) 470551.

ATARI STFM, meg memory, meg drive, over £500 originals, plus joystick and extras. First offer £300 plus secures. Tel: 041 882 4579.

TIMEWORKS DTP for Amstrad PCW 8256/8512, as new, £15 plus postage. Tel: Woking (0483) 764857. Also Sinclair QL, mint, 12 micro-cassettes £65.

CASIO FX730P pocket computer plus printer and cassette interface inc. case £50 o.n.o. Also Amstrad RS232C parallel interface £25 o.n.o. Tony 051 260 9296 (Liverpool).

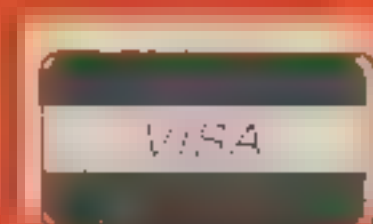
AMSTRAD 1512 software for sale: Reflex (Database) £15, Sidekick £15, both new with manuals. Tel: 081 592 5603 (Dagenham).



TARGET COMMUNICATIONS

HOME AND BUSINESS SYSTEMS CALNE
BEST PRICES - BEST PRODUCTS - BEST SERVICE
COMPARE OUR PRICES - THEY ARE GUARANTEED
FREE TECHNICAL HOT-LINE SUPPORT

9 HIGH STREET, CALNE, WILTSHIRE, SN11 0BS
Tel/Fax (0249) 821722 Access and Visa welcome



Amiga

Amiga 500	£340
As above + monitor	£575
Amiga 500 1 meg ram	£400
As above + monitor	£635
Amiga 500 class of 90s	£540
As above + monitor	£775

Atari

520 STFM Discovery pack	£240
As above + monitor (col)	£475
520 STE Power pack	£340
As above + monitor (col)	£575
1040 STFM Super pack	£385
1040 STE Pro pack	£385
1040 STE Midi man pack	£385
1040 STE Extra pack	£385
As above + monitor (col)	£610

All Amiga and Atari packs come with 10 public domain disks mouse mat and joystick

Commodore PC Starter packs

Commodore PC10 from	£500
Commodore PC 20 from	£700
Commodore PC 30 from	£1010

Monitors

Atari SM124 12" hi res mono monitor for ST	£119
Philips 8833 med res colour monitor ST/Amiga	£225
Commodore 1084 for Amiga C64 PC	£230

IBM Compatible monitors cga, ega vga available

Disk Drives

Disk drive 3.5" for Amiga range	£65
Disk drive 5.25" for Amiga range	£110
Disk drive 3.5" for Atari range	£69
Disk drive 5.25" for Atari range	£110

Memory Expansion

Amiga A501 (Commodore)	£129
Amiga 0.5 mbyte ram expansion	£60
Atari STE 1 mbyte ram upgrade	£95
Atari STE 2 mbyte ram upgrade	£240
Atari STE 4 mbyte ram upgrade	£400

Disks

3.5" Bulk unbranded Sony *10	£4.80
3.5" Bulk unbranded Sony *50	£23
3.5" Bulk unbranded Sony *100	£46
5.25" Bulk unbranded Verbatim *10	£4
5.25" Bulk unbranded Verbatim *50	£19.50
5.25" Bulk unbranded Verbatim *100	£38

Also stockists for Acorn Amstrad Cambridge Epson Citizen Sega Lynx and too many more to list here

Software at up to 25% OFF RRP .. phone for prices. All prices exclude delivery and VAT and are subject to change without notice

BBC B, Wordwise+, ZIF socket etc. £300, dual disk drive, printer £200 all v.g.c. Contact: 9 Summer House Close, Godalming, Surrey, GU7 1PZ for more details. Also Spectrum 128k, datacorder, £60 o.n.o. Loads of BBC disks and magazines also.

SINCLAIR PC200, IBM compatible, 3 1/2 drive, 512k, mouse, DOS 3.3. Gem, TV Modulator, some software £180. Tel: 081 592 5603 (Dagenham).

IBM compatible 640k dual drive, EGA monitor, Star LC10 printer, £795 o.n.o. Tel: (0222) 342150, Kam.

HERCULES CGA card with printer port parallel boxed as new £25. Phone 061 998 6961. Also VGA card 8/16 bit £60.

8-UP 8meg RAM board for Amiga 2000 only 2 weeks old with warranty, fully populated to 8 megs 100n/s only £600. Phone 061 998 6961.

BBC bits Watford DFS £35, Torch 2nd processor £45. (0784) 430005.

AMIGA A500 1.3 for sale, loads of software £275. Deliver in North'd area. Lee, 53 Stanley Street, Blyth, Northumberland, NE24 3BX.

DISKS for sale; over 200 blanked 3 1/2" disks, £4.00 per (10) disks (includes P&P) Phone Ashley on (0636) 708063.

STE upgrade boards 520-1040 plug in boards, 2 sets available £40 each including postage Phone Jim (0232) 794812 home (0232) 241573 work.

GAMEBOY including Tetris £70 or swap for second drive or good modem (for Amiga), excellent condition. Tel: (0580) 714445 eves. Ask for John.

PCXT Orchid Turbo co-processor, 640k, fast RAM, 8Mhz, bought error hence £100, no offers (cost over £300!) virtually new! Phone Darrin (0625) 873144.

AMIGA A500 2Mb, external RAM, expansion fully auto configure, fast 120ms chips, disable switch, led indicator, cost over £350, accept £200 o.n.o. Phone (0625) 873144.

DACOM 2123AO modem, v21, v22, v23, error correcting, auto dial, auto answer, Hayes compatible, cost over £250, accept £90 o.n.o. Phone Darrin (0625) 873144.

CITIZEN 120D parallel printer, very reliable, suit any computer, nearly new, cable included, spare ribbon, tractor feed, cash only £75 o.n.o. Phone Darrin (0625) 873144.

SPECTRUM+ with Saisho datacorder, Kempston interface and competition pro joystick, varied software including Flight Simulators, Dragon's Lair, Star Wars, Paperboy, Flintstones £45. (0329) 237374.

ATARI 520STFM with 72+ games, STOS, Tweety board, Seuck, utilities, mouse, joystick, worth £2000+, sell for £500 o.n.o. Buyer collects, call Time (0223) 351138.

MIRROR II v3.6.12 3 1/2" and 5 1/4" discs, manual, originals £15 o.n.o. Post paid. Phone Phil on 081 521 9966, East London.

SPECTRUM +3 With joystick approx. £220 worth of software (17 discs), leads/manuals, as new, all original boxes £200 o.n.o. Tel: (0782) 268235 evenings, ask for Dave.

EINSTEIN TCOI twin floppies with mono monitor, BBC Basic (Z80) and various games £95. Phone Jim (0730) 60277 (Petersfield, Hampshire).

AMSTRAD CPC464 mono £100. Hatfield (0707) 260417.

ATARI 520STFM, 1/2 meg drive, £200 s/ware, diskbox, dust cover, blank disks, joystick, mouse, dozens mags. Bargain £210. Phone Darryl Boulton on (0989) 65818.

SEGA Master system, control pads, joystick, 8 games incl. Powerstrike, Alex Kidd, Pro Foot-

ball, Wonderboy in Monsterland, only £100. Tel: (0260) 276574, ask for Robert.

AMSTRAD DMP2000 printer, fully Epson compatible, works with BBC and Amiga, only £75 o.n.o. plus postage. Phone David on Derby (0332) 517947 eves, weekends.

COMMODORE 64C "Light Fantastic" pack inc. Light Gun, special s/w, Xtra s/w, manuals. Less than one year old, £125 o.n.o. Tel: Derby (0332) 517947.

AMSTRAD CPC software: Afterburner (disc) £4.50, The Pawn (disc) £10.00. Send SAE tape list to: Paul, 39 Guiton, Ash, Nr. Canterbury, Kent, CT3 2HL.

MAGAZINES (Amstrad CPC): AA 1-56, NCE 10-75, Wacci 29, 36-41. Any reasonable offer to: Paul, Guiton, Ash, Nr. Canterbury, Kent CT3 2HL.

SPECTRUM+2A, recently serviced, perfect working order, brilliant collection of popular games, two joysticks and interface, worth over £430, sell for £240 o.n.o. (0908) 567325.

BBC B £100, software worth £500, sell for £150. Light pen + software £10. Watford Speech + software £15. Data Recorder £10. Sell lot £250 Tel: 051 480 3212.

AMIGA A500 (1mb), second disk drive, Digiview Digitiser, Deluxe 2, Photon Paint, other software, £400. Ring (05913) 355.

MSX Sanyo, loads of games, cassette recorder, sell or swap. Anything for Amiga 500 software, utilities, hardware etc. Tel: Peter after 6.30 (0782) 518514.

HISOFT Forth and Digital Research Pascal MT+ both with manuals £20 each, for CPC and PCW. (0204) 24516.

ST games: eleven for £40. Also 3 1/2" disks, fifty for £30. (0209) 713766.

SPECTRUM 128k with plusD and 3 1/2" disk

drive, games, double interface and Organ Master Keyboard. Worth £400 yours for £260. Phone quick on (0705) 668123.

CBM64 computer, Oceanic disk drive cassette deck for sale. Software also, joysticks etc. £170 o.n.o. Call Willie after 5pm (0533) 737003.

SPECTRUM +2 complete outfit, manual, joystick, dust cover etc. 27 months guarantee. Spectrum mags worth £110, 100+ games, very good value £306. Queries phone 081 561 3452.

SCHNEIDER, german name, triple cassette, radio player, detachable personal stereo and speakers, R.P.S. graphic equalizer, v.g.c. £60. Phone 081 561 3452.

PERSONAL

PLEASE could Mighty Clog, Zippy, Ormen or any other M.B. members contact James on: (0222) 752476. P.S. Hi Derek M.D. and Adrian.

UNUSED drive from a 6128; offers or swap tape to disc; unerase disc to disc etc. No tapes returned. Steve, 2 Ashmour Street, Stretford, Manchester M32 0HG.

PC Game/Quest contacts wanted to swap ideas/experience on Sierra etc. Also technical advice exchanged. Variety of software. Tel: 081-946 9384 - Shiham.

ST. What legalities must I go through to set up a PD Library, please contact: Jim, The Caravan, Fourwinds, Lower Moor, St. Davids, Haverfordwest, Wales, SA62 6PR.

AMIGA contacts wanted to exchange Sega assembly source, routines, sprites, scrollers etc and programming ideas in general. Gary, 14 Beeston Road, Broughton Nr Chester, Clwyd CH4 0SB.

TELEGAMES

Europe's Largest
Stock of Video
Games
& Cartridges For -

Still
Europe's No 1!
Why Wait, Call in
or order now.

SEGA

SEGA
MEGA DRIVE

Nintendo

PC
Engine

NINTENDO
GAMEBOY

COLECO
VISION

SNK
Neo-Geo

NEO GEO
now in
stock!

"What Video Game"
2 hour VHS film. Shows
all the main game
systems and over 400
games. Available now
£14.95.

ATARI
2600
and
7800

PC Super
Grafx now
in stock!

The leading Video game specialists.
Send for lists (state make of game)

Telegames, Wigston, Leicester, LE8 1TE.

Tel: 0533 880445, 0533 813606

or 0533 889989

HIGH QUALITY DISKETTES

TOP QUALITY DISKETTES 100% CERTIFIED AND GUARANTEED
100% ERROR FREE. MANUFACTURED AND QUALITY ASSURED
BY AN INTERNATIONAL BRAND NAME

3 1/2" DS 39p
DD 135 TPI EA

5 1/4" 21p

3 1/2" 99p

5 1/4" DS 46p
HD 1.6 MEG EA

EURODATA
12A QUAKERS YARD
ADAM AND EVE ST
MARKET HARBOROUGH
LEIC LE16 7LT
TEL: 0858 33992
FAX: 0858 32549
GO ON BE TEMPTED

LIFETIME GUARANTEE
ALL PRICES INCLUDE DISKETTE
LABELS ENVELOPES AND VAT
ORDER NOW WITH POSTAL ORDER
OR CHEQUE MADE PAYABLE TO
EURODATA, OR TELEPHONE YOUR
ORDER USING MASTERCARD & VISA.
SUBJECT TO AVAILABILITY
ADD £2.80 P&P



LOWEST
PRICES
FOR HIGHEST
QUALITY

Evesham Micros

RETAIL SHOWROOMS

63 Bridge Street
Evesham
Worcs WR11 4SF
☎ 0386-765180
fax: 0386-49761
Open Mon-Sat, 9.00 - 5.30

5 Glisson Road
Cambridge CB1 2HA
☎ 0223-323898
fax: 0223-322883
Open Mon-Sat, 9.30 - 6.00
Specialist Education Centre

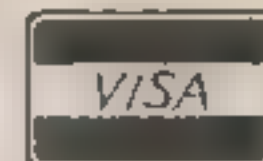
1762 Pershore Road
Cottrells
Birmingham B30 3BH
☎ 021-458 4564
fax: 021-433 3825
Open Mon-Sat, 9.00 - 5.30

ALL PRICES INCLUDE VAT AND DELIVERY
Same day despatch whenever possible. Express Courier delivery £5.00 extra.

MAIL ORDER DEPARTMENT

Unit 9 Richards Rd, Evesham, Worcs WR11 6XJ

Call us now on ☎ 0386-765500
8 lines, Open Mon-Sat, 9.00-5.30. Fax: 0386-765354
Technical support (open Mon-Fri, 9.30-5.30): 0386-40303



Send an Order with Cheque, Postal
Order or ACCESS/VISA card details

Government, Education & PLC orders welcome
All products covered by 12 Months Warranty
All goods subject in availability, E. & O.E.



All our Atari ST prices include: mouse etc. plus 5 disks
of software including 'First Word' wordprocessor,
utilities, 'Neochrome' graphics utility, game and demos.

520 STFM DISCOVERY PACK

Good quality, good value package based around the 520STFM computer including
512K RAM, 1Mb Drive and built-in TV modulator. Also supplied is:

STOS Game Creator
Carrier Command
Space Harrier
First BASIC
Outrun
Bomb Jack
Neochrome
Atari ST Tour
plus 'Discovering your Atari ST' Book

£259.00
Inc. VAT & Delivery

Also available with 1Mb RAM fitted for only £339.00

1040 STE PROFESSIONAL PACK

Excellent starter package, including the very latest 1040STE machine with 1Mb
RAM, 1Mb Drive, plus the following extras:

Kuma Wordprocessor
Kuma Database
Kuma Spreadsheet
Kuma Business Graphics
STAC Adventure Creator
Hyper Paint (STE version)
First BASIC
'Prince' game

£429.00
Inc. VAT & Delivery

520 STE POWER PACK

Includes the very latest 520STE with 512K RAM, 1Mb drive, joystick, mouse, user guide,
5 disks of public domain software, plus an incredible selection of chart-topping software
with a total RRP of over £500! Software Included is:

R-Type
Afterburner
Double Dragon
Super Hangon
Space Harrier
Overlander
Pacmania
Starblaster
Super Huey
Eliminator
Predator
Bombjack
Out Run
Bombuzal
Xenon
Gauntlet II
Black Lamp
Staray
Nebulus
Starblaster
First Music
First Basic
Organiser

£339.00
Inc. VAT & Delivery

HURRY! VERY LIMITED SPECIAL OFFER: 520STFM with 1Mb RAM installed
PLUS all software extras as supplied with 'Power Pack' and ALSO all
software as supplied with 1040STE Pro. Pack - ALL FOR ONLY £399.00

520STE 1Mb RAM Upgrade Kit, extremely simple to fit (SIMMS cards) £49.00
520/1040STE 2Mb Memory Upgrade Kit, with simple fitting instructions £145.00
520/1040STE 4Mb Memory Upgrade Kit, with simple fitting instructions £290.00
520STFM 1Mb Drive Upgrade Kit with full fitting instructions £64.95
520STFM 1Mb Memory Upgrade Kit, requires soldering £59.00
Mega ST1 with monochrome monitor £599.00
Mega ST2 with monochrome monitor £849.00
SM124 monochrome monitor £99.00
SC1224 colour monitor £279.00
Philips CM8833 14" colour monitor (stereo sound) c/w ST cable £259.00

Amstrad PC1512/1640/2086

All Amstrad Products include 12 Months On-Site Maintenance

- All PC models include
'Top 10 Solid Gold'
Games Package!
- Amstrad PC1512 models
include 'Migent Ability'
and 4 US Gold Games

**CREATE YOUR OWN HARD
DISK CONFIGURATION FOR
ANY 1512/1640/2086 MODEL!**

Using a Western Digital
Filecard, which includes XTree
and SpeedRead software, we
can upgrade the PC for you
before despatch. Using the
'SD' column of the price table,
simply add £225.00 inc. VAT
for a 21Mb configuration,
£239.00 for a 32Mb
configuration, or £279.00 for a
41Mb configuration.

	SD	DD	AMS H.O.
MONO 1512	346.96 399.00	433.91 499.00	N/A N/A
COLOUR 1512	433.91 499.00	555.65 599.00	N/A N/A
MONO 1640	477.39 549.00	554.35 649.00	738.26 849.00
CGA COLOUR 1640	564.35 649.00	651.30 749.00	825.22 949.00
EGA (ECO) 1640	651.30 749.00	738.26 849.00	912.17 1049.00
2086 MONO	433.91 499.00	520.87 599.00	694.78 799.00
2086 CD	564.35 649.00	651.30 749.00	825.22 949.00
2086 12" HRCD	564.35 649.00	651.30 749.00	825.22 949.00
2086 14" HRCD	607.63 699.00	694.78 799.00	868.70 999.00

upgrades / accessories

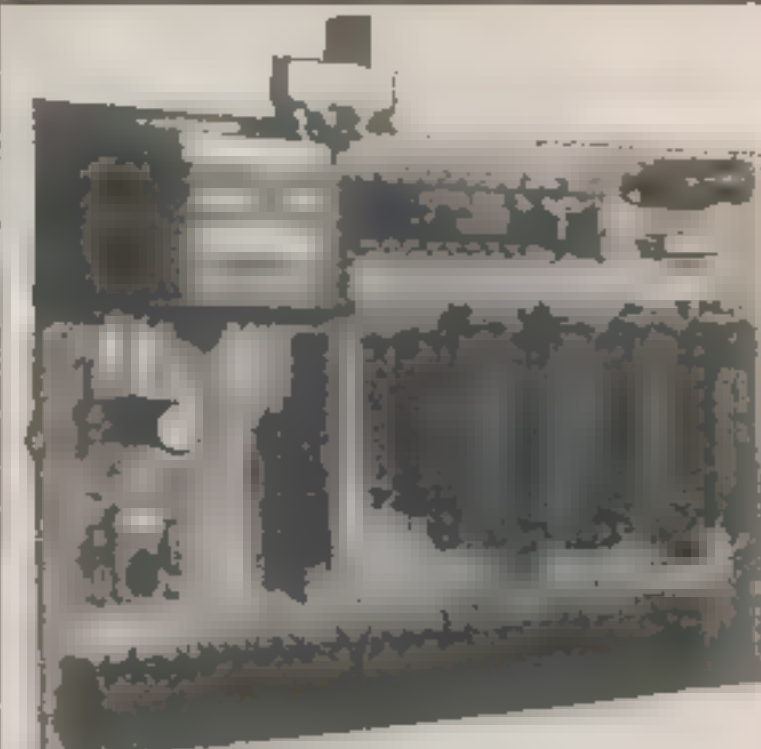
PC1512 memory upgrade to 640K £29.95
Maths Co-processor 8087-2 £119.00
NEC V30 (8086 replacement) £24.95
Amstrad Modem Card V21/23 £99.00
Communicate Fax Card SR £199.00
Archive XL 40Mb Ext. tape streamer £379.00
Enhancer 101 replacement keyboard £74.95
Internal 3.5" drive (720K) for SD PC's £79.95
PC2000 series compatible
5.25" (360K) external drive £84.95
Genius GM6000 Mouse package £32.95
Suncom Joystick & Controller Card £28.95

Low price External 3.5" floppy drive (720K), suits any Amstrad PC
1512/1640 inc. DD and HD models, uses no expansion slots £99.95

Amstrad Laptop Portables

- prices in brackets are excluding VAT -

PPC512S (£373.04) £429.00
PPC512D (£433.91) £499.00
PPC640S (£477.39) £549.00
PPC640D (£546.96) £629.00
ALT286 (£1390.43) £1599.00
ALT386sx (£1738.26) £1999.00



AMIGA A500
**512K
MEMORY
UPGRADE**

ONLY £43.00 inc. VAT & delivery

512K RAM/CLOCK EXPANSION FEATURES:

- ☆ Direct replacement for the A501 expansion
- ☆ Convenient On / Off Memory Switch
- ☆ Auto-recharging battery backed Real-time Clock
- ☆ Compact unit size: Ultra-neat design
- ☆ Uses only 4 D-RAMs for High Reliability
- ☆ Low power consumption

RAM expansion without clock, only £37.00

Amiga & ST 3.5" Drives

- ★ Very Quiet
- ★ Slimline Styling
- ★ Fully Compatible
- ★ Top quality Teac/Citizen drive mechanism
- ★ On/Off switch for Amiga
- ★ External plug-in PSU for ST
- ★ Throughport for Amiga
- ★ 1Mb unformatted capacity

Fully compatible, high quality 3.5"
external drives for the ST and Amiga

Amiga version only £64.95
Atari ST version only £69.95

Prices include VAT & delivery

Western Digital Filecards

Upgrading your PC to hard disk? Look no further, we offer the best prices on top quality
filecards, with outstanding data transfer rates owing to new, higher specification hard drive
mechanisms. Thorough documentation supplied, low power consumption, with free XTree file
management software and SpeedRead. For Amstrad 1512/1640/2086 users we supply filecards
tested and formatted, with our simple software installation utilities. The best packages available?

21MB...£225.00 32MB...£239.00 41MB...£279.00

3.5" disks

10...£9.95 in plastic case £11.95
25...£22.95 in 40 cap case £29.95
Fully guaranteed double sided media

5.25" disks

10...£11.95 in 50 cap box £16.95
25...£21.95 in 100 cap box £29.95
Fully guaranteed double sided media

PRINTERS

All prices include VAT, delivery and cable

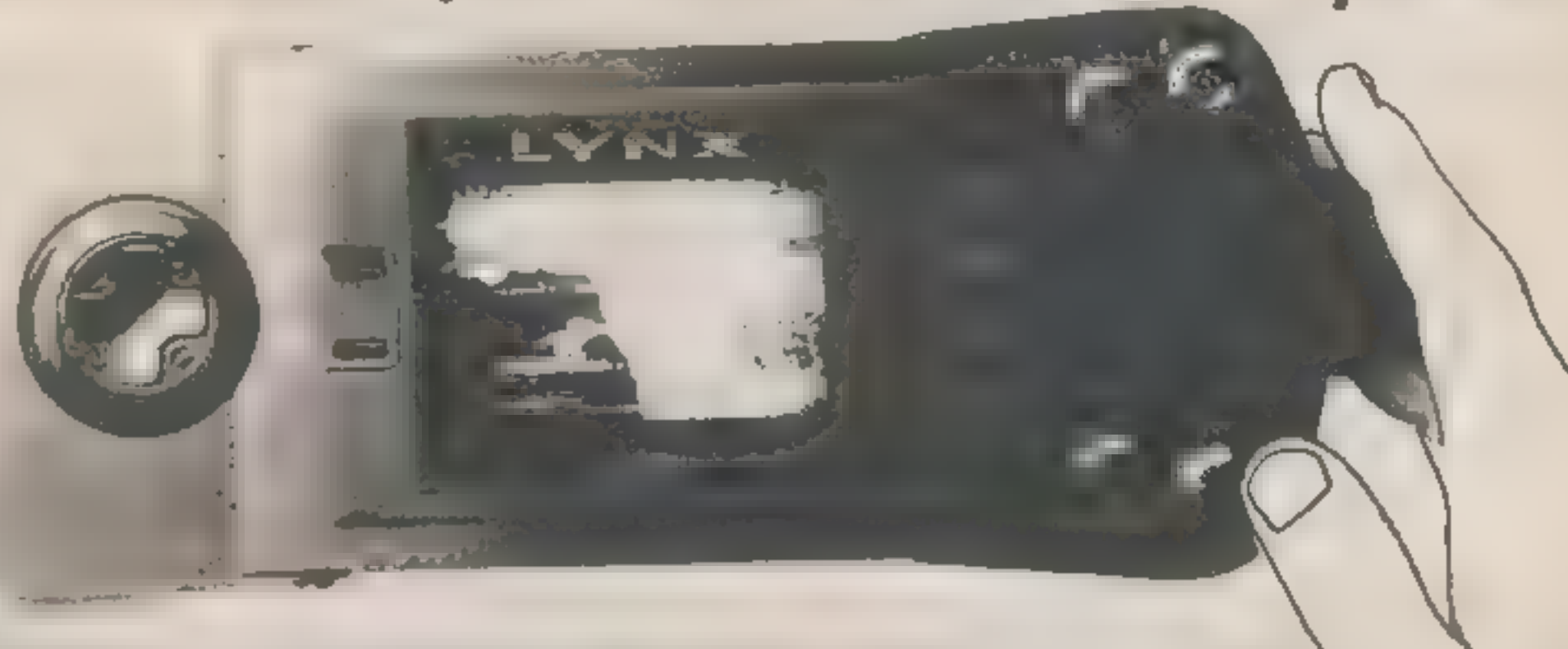


We use and recommend Star printers since they do
offer an unbeatable combination of features, price,
quality, reliability and value. Get it right with a
Star printer at our special, all-in, prices. We can provide on-site
maintenance contracts for only £7.95 extra.

Star LC24-10 feature-packed multifont 24 pin printer, amazing low price £239.00
Star LC10 best-selling 144/36cps printer, 4 NLQ fonts, inc. 2 extra ribbons free .. £159.00
Star LC10 7-colour version above printer, inc. 2 extra black ribbons £209.00
Star LC15 wide carriage version of LC10 £329.00
Star LC24-15 wide carriage version of LC24-10 £409.00
Star FR-10 new Professional 9pin 300/76 cps, 31K buffer, 16 NLQ fonts,
EE-PROM configuration memory and 12 months on-site maintenance £399.00
Star FR-15 9pin as FR10, wide carriage version £499.00
Star XB24-10 Professional 24pin: 27K buffer, 4 SLQ & 25 LQ fonts with
EE-PROM configuration memory and 12 months on-site maintenance £499.00
Star XB24-15 wide carriage version of XB24-10, with 41K buffer £649.00
Star Colour Upgrade Kit for XB or FR series printers (please state which) £39.00
Hewlett Packard Deskjet+ 300dpi inkjet printer £595.00
NEC P2+ budget 24pin £289.00
Panasonic KXP1180 super new 9pin with over 3400 typestyles, 11" carriage £179.00
Panasonic KXP1124 good quality 11" multifont 24pin printer £259.00
Panasonic KXP1624 wide carriage version of KXP1124 £399.00
Epson LX400 popular 10" 180/25 cps £159.00
Epson LQ550 (was LQ500) good 24pin printer 150/50 cps £349.00
Mannesmann Tally MT-81 130/24 cps £149.00

- Fantastic hand-held portable 16-bit video games machine
- Excellent built-in high definition, full colour LCD display
- Capable of displaying up to 16 colours out of a possible 4096
- 32-bit audio processor produces superb 4-Channel sound
- Left or right hand play easily achieved with screen flip option!
- Multiplayer Competitions possible using COMLYNX cable (supplied) to connect with other Atari Lynx systems
- Free California Games (multiplayer) game card supplied!
- Uses 4 AA batteries (not supplied) or AC adapter (supplied)

ATARI Lynx Portable Games System



ONLY £159.00 including VAT and delivery

Game Cards now available:

Blue Lightning	£19.95
Gates of Zendocon	£19.95
Electro Cop	£19.95
Chips Challenge	£19.95
Gauntlet III	£22.95
Rampage	£22.95



All A500 Packages also include the following:

Karate Kid II, Battle Squadron, High Steel, Wordwright (w/processor), Super Huey, Night Walk

A500 512K Flight of Fantasy pack includes 4 software titles and TV modulator	£379.00
A500 512K Batpack includes 4 software titles and TV modulator	£379.00
Amiga 500 1Mb Batpack (OR F.O.F. Pack) features our 1Mb RAM Upgrade fitted	£419.00
Amiga 500 Batpack (OR F.O.F. Pack) with Drive includes our 3.5" External Drive	£439.00
Amiga 500 1Mb Batpack (OR F.O.F. Pack) with Drive features our 1Mb Memory Upgrade plus 2nd 3.5" External Drive	£479.00

External 5.25" 40/80 track switchable drive	£99.00	MiniGEN Genlock Adapter	£95.00
Omega Projects MIDI Interface	£29.95	Philips CM8833 colour monitor inc.cable	£259.00
Vidi-Amiga video digitiser package	£95.00	Contriver Hi-Res replacement Mouse pack	£22.95
Vidi-Chrome colour software for Vidi-Amiga	£16.00	Amiga 500 dust cover	£4.95

CBM A590 HARD DRIVE

Good quality 20Mb Hard Disk from Commodore, including its own PSU. Features sockets for up to 2Mb of FAST RAM expansion (see below). 80ms Access time, with up to 2.4Mb/sec transfer rate. Will autoboot when used with Kickstart 1.3. Has built-in cooling fan.

Only £379.00

A590 512K RAM Upgrade kit	£36.00
A590 1Mb RAM Upgrade kit	£70.00
A590 2Mb RAM Upgrade kit	£135.00
RAM upgrades fitted free when bought with A590.	

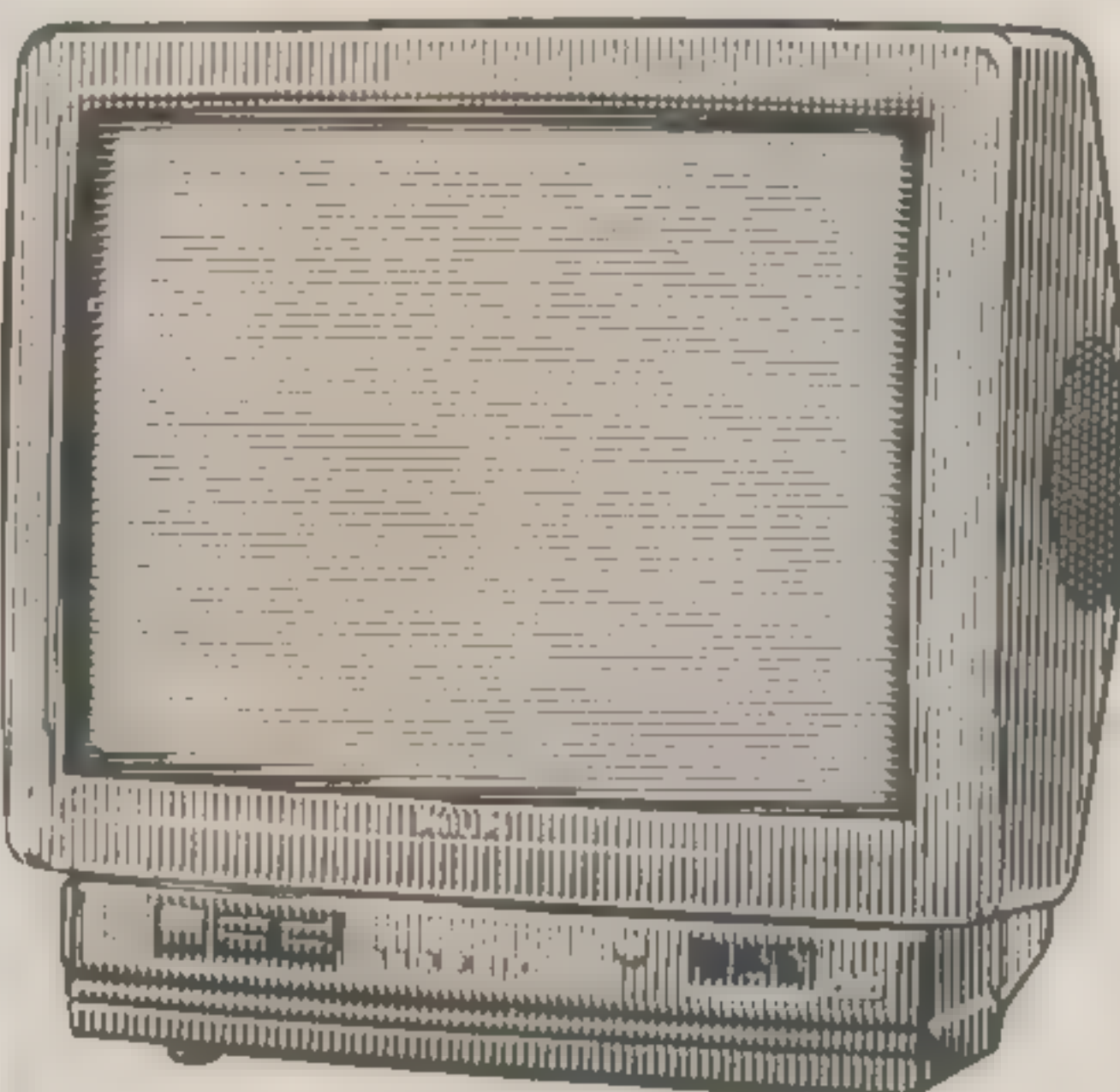
PHILIPS 15" FST TV/Monitor (MODEL 2530)

With its dedicated monitor input, this model combines the advantages of a high quality medium resolution monitor with the convenience of remote control Teletext TV - at an excellent low price!

- ✓ Suits ST or Amiga (cable supplied)
- ✓ Teletext facilities; on screen graphics
- ✓ Full infra-red remote control
- ✓ SCART Input/Output Connector
- ✓ Audio/Composite Video inputs
- ✓ 60 TV tuner presets
- ✓ Headphone private listening jack
- ✓ External aerial input (loop supplied)

£269.00

includes VAT, delivery and computer connection lead



ATARI ABC-286

FREE with all ABC-286 machines: Logotron '8-in-1 Professional' Inc. W/Processor, Database, Spreadsheet, Graphics, etc.

- ☆ 80286 Processor with 8 Mhz clock speed
- ☆ 640K RAM standard, expandable to 1 Mb
- ☆ 3 AT/XT compatible Expansion slots
- ☆ 1 RS232 Serial and 1 Parallel ports
- ☆ Disk controller supports 2 floppy & 2 hard drives
- ☆ One 3.5" (1.44Mb) floppy drive and 1 30Mb hard disk drive fitted as standard
- ☆ Socket for 80287-8 Maths Co-Processor
- ☆ Video graphics adapter supports EGA, CGA, MDA and Hercules, with digital video port
- ☆ 102-key DIN spec. AT-Protocol keyboard
- ☆ Supplied with MS-DOS 3.3 and GW-BASIC

ABC-286 S.D./30Mb without monitor	£803.85
ABC-286 S.D./30Mb with Mono Monitor	£861.35
ABC-286 S.D./30Mb with EGA Monitor	£976.35

Optional 5.25" 1.2Mb internally fitted floppy drive available £119.00
Prices include VAT/Delivery

olivetti DM100S



Top value, high performing 9-pin dot matrix printer

- 200cps draft, 30cps NLQ print speed
- Pica, Elite and Condensed printing
- Standard Centronics Parallel interface
- Friction and Tractor feed
- Optional auto cut sheet feeder available

ONLY £129.95

Cut sheet feeder available for only £79.95
Prices include VAT, delivery and 12 months on-site maintenance!

olivetti PCS 86/286

FREE WITH ALL MODELS

- ✓ 12 Months On-Site Maintenance
- ✓ Genius GM-02 Mouse with software
- ✓ Logotron 'Eight-In-One' Integrated Package
- ✓ Top 10 Solid Gold Games package



FREE WITH EVERY PCS286: OLIVETTI DM100S 9-PIN PRINTER!
or if you prefer, £129.95 inc. VAT allowance on another printer of your choice.

- ◆ 101/102 key AT-layout PS/2 compatible keyboard (Mini-DIN)
- ◆ 1 x RS232 Serial interface and 1 x Centronics Parallel interface
- ◆ VGA compatible (OVC) display controller fitted standard
- ◆ VGA monitors: 14" Colour / 12" Mono. (dot pitch 0.39mm)
- ◆ Socket for Optional Maths Co-Processor
- ◆ Hard Drive versions: 20Mb (27ms access time) / 40Mb (29ms)

PCS 86

- ◆ NEC-V30 microprocessor 10Mhz clock speed, 0 wait states
- ◆ 640K RAM standard, upgradeable to 2.5Mb on motherboard
- ◆ Single or Twin 3.5" floppy drives with 720K formatted capacity
- ◆ 3 Full size XT-compatible 8-bit expansion slots

PCS 286

- ◆ Intel 80286 microprocessor 12Mhz clock speed, 1 wait states
- ◆ 1Mb RAM standard, upgradeable to 4Mb on motherboard
- ◆ Single or Twin 3.5" floppy drives with 1.44Mb formatted capacity
- ◆ 3 Full size expansion slots; 1 x 8bit and 2 x 16bit (XT/AT style)

	SD	DD	SD 20MB	SD 40MB
PCS86 MONO	549.00 631.35	649.00 746.35	849.00 976.35	N/A N/A
PCS86 COLOUR	699.00 803.85	799.00 918.85	999.00 1148.85	N/A N/A
PCS286 MONO	N/A	949.00 1091.35	1049.00 1206.35	1149.00 1321.35
PCS286 COLOUR	N/A	1099.00 1263.85	1199.00 1378.85	1299.00 1493.85

Logotron 'Eight-In-One' package includes Wordprocessor, Database, Spreadsheet, Graphics etc.
'Top 10 Solid Gold' games pack includes Arcade, Adventure, Creativity, Simulation & Strategy titles.

ACCESSORIES

5.25" 1.2Mb/360K drive with controller	£129.95
PCS286 2Mb RAM Upgrade Kit	£145.00
PCS286 4Mb RAM Upgrade Kit	£290.00

DISKS!

5 1/4 DS/DD£0.21p

3 1/2 DS/DD£0.40p

Prices include VAT

FULLY GUARANTEED MEDIA
STRICTLY MAIL ORDER

Orders will not be accepted without the
carriage charge: £3.50

Orders accepted at our discretion



We accept credit cards



JOLAC DATAMEDIA LTD

45 Elswick, Skelmersdale,
Lancashire, WN8 6BX

Telesales: (0695) 32382 (0831) 354144

LOOK! WHY PAY MORE
FOR YOUR DISKS & BOXES?

3 1/2" DS/DD

39P

LOOK!
DISK BOXES
40 CAP £4.00
80 CAP £4.25

INCL
LABELS

3 1/2 DS/DD
80p

200 3 1/2 DS/DD
+ 2 100 cap boxes
inc P&P £84.00

SAME DAY
DESPATCH

100 3 1/2
DS/DD + 100
CAP BOX
£44.00

ADD £2.50 P&P. ADD £9 next day delivery.

AMIGAS

BATPACK£358
FLIGHT OF
FANTASY£359
CLASS OF
THE 90'S£493

Mouse Mat£2.80
Cleaning Kit£2
Ram Pack£42
+ clock£46
Cumana ext
drive£66

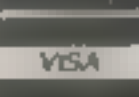
ATARIS

DISCOVERY£259
EXTERNAL
DRIVE + PSU£67
Zip Stick£11
Cheetah 125+£6.90

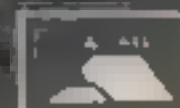
★ C64 WORLD CUP PACK £130 ★

CALL OR SEND CHEQUES TO B.C.S LTD

349 DITCHLING ROAD, BRIGHTON BN1 6JL



0273 506269 or 0831 279084 24 hours 7 days



VISA

CONSOLE SUPPLIES

Dept NCE, 13 Spencer Road, Ilford, Essex, IG3 8PW
Tel: 081 597 0500 Fax: 081 598 1791



DESCRIPTION	SELLING PRICE	DESCRIPTION	SELLING PRICE	DESCRIPTION	SELLING PRICE
SEGA		PC ENGINE		NEO GEO + JOYSTICK£430.00	
Sega Megadrive PAL£175.95		PC Engine PAL£165.00		VIETNAM 1975£220.00	
Sega Megadrive SCART£175.95		PC Engine SCART£160.00		MAGICIAN LORD£220.00	
Pro-1 Joystick£34.95		PC Engine Super Grafx£279.99		BASEBALL STARS£220.00	
Afterburner 2£34.95		PC Corr Grafx£175.00		MAJOK£220.00	
Alex Kidd£22.95		CD Rom Unit£315.00		MAIL ORDER ONLY	
Curse£34.95		ASC II Joystick£38.95			
Daimaki Mura£37.95		Five Player Unit£19.95			
Darwin 4081£34.95		Joypad£15.95			
Forgotten Worlds£34.95		Alien Crush£25.95			
Golden Axe£35.95					
Herzog Zwei£34.95					
Assault Suit Leynos£35.95					
Majung Cop Ryu£34.95					
New Zealand Story£35.95					
Osomatsu£22.95					
Phantasy Star 2£55.00					
Phantasy Star 3£60.00					
Power League£32.95					
Psyco Blade£37.95					
Rambo 3£34.95					
Sokoban£35.95					
Sorceran£35.95					
Space Harrier 2£35.95					
Super Real Basketball£35.95					
Super Hydride£39.95					
Super Shinobi£35.95					
Thunderforce II£35.95					
Vermillion£34.95					
Zoom£24.95					
DJ Boy£35.95					
Final Blow£36.95					
GAMEBOY					
Gameboy£85.00					
Gameboy + Tetris£109.00					
Alleyway£16.90					
Baseball£26.90					
Baseball Kids£25.90					
Batman£26.90					
Blodia£25.90					
Dead Heat Scramble£25.90					
Dracula£26.90					
Flappy Special£28.90					

ST contacts wanted who can help me find some of the so called 800 fonts for Signum II: Jim Sawle, The Caravan, Four Winds, Lower Moor, St. Davids, Wales, SA62 6PR.

ST PD and demos wanted will swap for other demos. NO illegal software. Contact: Jon at Southwinds, 4 Deep Drive, Dorking, Surrey, RH5 4AD. NO PIRATES.

SWAP Amiga 1 meg, extra drive, Hi-res colour/green monitor, printer, 200+ disks, too much to list, wanted Archimedes or PC system, W.H.Y. Tel: (0946) 691420.

HELP C64 require local contacts or clubs. I am only a recent owner of a C64 and would welcome advice and tips for programming. Thanks. Mr Hooper, 4 Sydenham Pl, Otley Rd, Bradford, E. Yorkshire.

ELECTRON users! Contacts wanted for swaps of software (3.5" ADFS/Tape) and games/programming tips. Write to: Steve, Hartford Crescent, Bedlington, Northumbria NE22 6LB. Or phone (0670) 829158 after 5pm.

HX20 help! My machine has no manuals. Can anyone lend me some for machine and "FFWriter" Chip? Peter Meadowfair, 7B Cannon St, Devonport, PL1 4PF.

ST Penpal wanted to swap original games. Also swap films and tips. Contact: Stuart, 43 Havant Rd, Hayling Island, Hants, PO11 0PT.

ATARI ST 68000 and STOS users wanted to swap source code etc. Write to: Steve, I Clarkes Field Close, Brill, Bucks HP18 9SP.

AMIGA contacts wanted, must be fast and reliable, no lammers or beginners thank you! Just quality individuals and groups. Mr Edge, 73 Mantle Close, Rowner, Gosport PO13 9QT.

MANY thanks to all for all the Oric info - problem solved! - Steve, Northwich.

ATARI ST contacts required. Write to: Twitch,

1 Goodwin Road, Aylesbury, Bucks HP19 3EE. Into games, music, pix etc. S.A.E. ensures mega quick reply.

ALIEN Of The Pompey Pirates. Happy (belated) Birthday. Thanks for the many hours of fun you've given me. Regards and best wishes from Demon Dave.

VAPOUR Of Auto. Sorry to see you go, but it was rather silly to put porno pictures on your disks. Thanks for the fun.

SIMON from London. Please write back to Paul from Gateshead with your address, so I can reply to your letter!!!

HELP urgently needed to find any way around Amiga A500 and Muic-X. Southend-On-Sea. Please ring Peter: (0702) 588304 any time.

SOCIAL workers would like to correspond with users of PC's or Mainframes, inc childcare. Particularly in assessment, delinquency monitoring and other related work. Confidence ensured. Tel: (0254) 776372.

ST contacts urgently wanted, established owners only. Send details to John, 42 Massey Street, Sutton, St. Helens, Merseyside.

ST artists needed for mega demo. Please contact: Sam Churchill, 2 Pix Road, Letchworth, Herts, SG6 1PX. Also needed STOS coders, please send samples.

TECHNO Wizard needs STOS routines and artwork for Mega Demo. Send samples to: 3 Pear Tree Dell, Lordship Estate, Letchworth, Herts SG6 2SW.

AMIGA demo freaks contact me for swapping. Contact: Anthony, 28 Ormond Ave, Blackpool, Lancs., FY1 2LW.

GENIUS Amiga owner with huge software collection wishes to swap his games, as completed, will sell also. Tel: Tony (0703) 440084.

WANTED: People using Hi-Soft Basic to

exchange code. Please write: Nigel, Welland House, Welland Buildings, Caerphilly, Mid Glamorgan, CF8 2AP.

● USER GROUPS

WANTED (for spares) inc daisy wheels, by charity, any defunct or retired Olivetti TES401 typewriter/word processor, will pick up, minimal cash payment or inc. tax receipt for charitable donation. Tel: (0772) 712565 John.

'RE-RUN' user group fanzine, for most 8-bits, Spec, BBC, ZX81 Sega etc. Only 20p and S.A.E. for issue one: 1 Northolme Close, Grays, Essex, RM16 2NX.

STEN free ST disk mag. Send disk and S.A.E. for first issue. Any help, articles etc welcome. Contact: 0698 38238, Dave, 14 School Road, Morningside, Newmans, Lanarkshire.

AMIGA owners! Paranoia, Quartex, Vision Factory, Red-Sector, Defjam, etc. To swap for latest work by these or other groups. Kammerling, Churchills, The Schools, Shrewsbury, Shropshire.

BEEB contacts wanted. All ages/levels of experience welcome. Write witty and interesting letter: Rafael Jay, Onslow House, Weston Road, Bath, BA1 2XX.

WOKING computer group, meets every Saturday at 6pm. St Mary of Bethany Church, Mount Hermon Road, Woking, Surrey. Call David on: 763223 for more information.

ARCHIMEDES Linguistics, random prose, Ever stories? We could try! Shall we start a group. (S.A.E. please) Tony Kelly, Can Y Llaer, Ffarmers, Llanwrda, Dyfed.

LOOK! The Plaza BBS has expanded! There are now 2(!!!) numbers to call! 081-543-6254 or 081-764-0954. V21/V23 10pm till 8am. See you soon!

collector wants contacts with same interests! No pirate software please! Group demos etc. Contact: Andy, 18 Lecan Rd, Barnet, Herts, EN5 4HA, thanks!!

NEW Amiga disc fanzine. Reviews, tips, demos. It's gonna be mega! S.A.E. for details. Chris Jackman, 3 Albion Terrace, Lexham Road, Litcham, Kings Lynn, Norfolk PE32 2QQ.

SHARP users club. The only one left for full support any model. Details: Andrew Ferguson, 11 Harcourt Close, Henley-On-Thames, Oxon, RG9 1UZ. Tel: (0491) 574850, evenings.

64 (Tape) not disk - users club about to start up - going global soon. Trade, Demos, comps: For details S.A.E. to: D. Mason, Ethorpe Hotel, Gerrards Cross, Bucks, SL9 8HY.

ADVENTURE enthusiast seeks contacts to exchange ideas etc for ST and PC games. Mr S Lucas, 47 Longcroft Lane, Cheadle Hulme, Cheshire.

ANY computer users who use Klaver Music Notation interested in forming/joining a user group; ring Mike on 01 520 5223.

BBC contacts wanted to exchange software, hints, tips etc. All letters replied to, write to: Scooney, 17 Cromer Avenue, Burley, Lancs BB10 3HA.

BOURNEMOUTH and POOLE Atari User Group. Support for 8 Bit and ST. Monthly meetings. Membership £8.00. Quarterly Newsletter £16. £3.80 four issues. Details write to: 248 Wimborne Road, Oakdale, Poole, Dorset.

COMPUTER Student Contacts Wanted. Write: A. Drewett, 37 Longdon Ave, Aylesbury, Bucks HP21 9UW.

DISK magazine for Amiga freaks. Send Submission on disk to: Arthur Wyatt, 68 Shefford Road, Meppershall, Shefford, Beds. Submission disks get returned with magazine on, blanks returned as blanks.

THE BEST SOFTWARE!
THE BEST SERVICE!
THE BEST PRICES!
UP TO **40%**
OFF R.R.P.!!

Stone MAILSOFT

DELUXE PAINT III
RRP £79.95
STONEPRICE
£55.35

WORDPROCESSORS

Kind Words 2	£34.95
Protext	£64.70
Pen Pal	£99.99
Publishers Choice	£78.70
Word Perfect	£155.99
Mavis Beacon: Typing Tutor	£23.70

FINANCE

Cashbook Combo	£49.25
Home Office Kit	£99.99
K-Spread 2	£43.15
Personal Accounts Plus	£24.95
Personal Tax Planner	£24.95
Superplan	£67.50
System 3	£34.95
The Works Platinum	£136.00

DATABASES

K-Data	£35.50
Prodata	£55.99
Superbase Personal	£42.50
Superbase Personal 2	£69.99
Superbase Professional	£169.95

PROGRAMMING

Devpac 2	£43.50
Hisoft Basic	£57.20
GFA Basic Compiler v3	£22.95
GFA Basic Interpreter v3	£39.90
Lattice C v5	£156.55
Lattice C Developers Pack	£39.90

EDUCATIONAL

Fun School 2	£13.90
--------------	--------

Teach Yourself: English £15.95
Teach Yourself: Maths £15.95

GRAPHIC/VIDEO

Deluxe Paint III	£55.35
Deluxe Photolab	£53.00
Deluxe Productions	£99.99
Deluxe Video 3	£57.50
Digiview Gold	£99.99
Photon Paint 2	£49.95

AUDIO/MUSIC

AMAS (Sampler + MIDI int.)	£74.25
Datel MIDI Master (Interface)	£34.99
Mastersound	£34.70
Music X	£159.99
Quartet	£37.95
Sonix	£49.70

All Prices Inc. VAT & 1ST CLASS POSTAGE!!
(FOR RECORDED DELIVERY PLEASE ADD £1.50) CHEQUES/P.O. TO:
STONE MAILSOFT (DEPT.NCE)
46 CHANTRY MEADOWS, ALPHINGTON, EXETER, DEVON EX2 0FF

**Stone
MAILSOFT**

24 hr CREDIT CARD HOTLINE!
MasterCard. **0392 213695**
ALL PRICES CORRECT & AVAILABLE AT TIME OF GOING TO PRESS. £ & 0 P.

MEL CROUCHER
-COMPUTER
FUN LINE

0898 299 399

New event
EVERY
WEEK!



3 mins of mind blowing
entertainment

**THE HOTTEST
GAMES
SECRETS**

MEGATIP
GAMESLINE
0898 299 388

Proprietor B. Everiss, PO Box 71, Kington, Warwick, CV35 9HA.

Calls charged at 25p per minute cheap rate and 38p per minute at all other times
(Ask whoever pays phone bill)

QUALITY SHAREWARE for the PC on QUALITY DISKS

1000's of programs available on all subjects -
catalogue on disk (5 1/4 or 3 1/2)
All Software supplied on
Verbatim Branded Disks.

PRICES

5 1/4" 10 for £18.00

3 1/2" 10 for £14.00

BPD & SL

17, KNOCKBREA PARK
BELFAST BT6 0HB

Telephone:

0232 645942

GUNFIGHTER



USE YOUR VOICE TO
OUTDRAW THE
GUNFIGHTER

CASH PRIZES

0898 31 35 94

INFODIAL POBox 36 LS1 4TN Call charges 25p Per Min Cheap 38p Per Min All Other Times

COMPUTER REPAIRS

Specialists in Home and Business Computers, all makes repaired.
ATARI, AMSTRAD, COMMODORE, SPECTRUM, SINCLAIR etc.
Atari Approved Service Centre
We also repair Printers, Monitors, Disk Drives etc.
FREE estimates, all work fully guaranteed.

A.M.C., UNIT 4, WESTON ROAD INDUSTRIAL ESTATE,
STRATFORD-UPON-AVON, WARCS, CV37 0AH
0789 292269

AMIGA & ATARI ST GAMES

Compute-IT THE GAMES CENTRE

151 HIGH STREET, TEWKESBURY, GLOS GL20 5JP
TEL: TEWKESBURY (0684) 290097

ALL COMPUTER HARDWARE AND SOFTWARE WANTED FOR CASH OR EXCHANGE

NOTHING REFUSED!!

01 727 0424

BUZZBOX COMPUTING.

5 Balmoral Road, Moorlands, Lancaster, Lancashire LA1 3BT

Buzzbox is a disk based magazine for the ATARI ST. It is packed from track to track with quality Public Domain. We receive contributions from some of the biggest Public Domain libraries in the land, and outside. Make no mistake Buzzbox is not all demos as other disk mags and the customer has a genuine say in what they would like to see, and complain about.

The best thing is the price.

£2.00 INC POSTAGE AND PACKING

ISSUE 5 is available from the 1st August, back issues are available upon request (no1 - 4). For further details send a SAE
QUITE HONESTLY CAN YOU AFFORD TO MISS IT?

COMPUTER REPAIR SPECIALIST - COMPUTER REPAIR SPECIALIST

COMPUTER REPAIR SPECIALIST

We charge just £15.00 labour plus the cost of
the parts fitted.

MGT SAM COUPE IN STOCK

WE CAN SUPPLY PARTS AND ADVICE ON YOUR COMPUTER.

MGT DEALER

AMSTRAD BUSINESS DEALER

More information? Call PHIL on 0909 487820

W & J ENTERPRISES, UNIT 1, CANAL TERRACE, WORKSOP, NOTTS

COMPUTER REPAIR SPECIALIST - COMPUTER REPAIR SPECIALIST

COLOUR MONITORS

12" High resolution, RGB
input, IBM compatible, in
screening case and with
pcu, ready to use.
Brand new
£89.00 + £5.00 delivery

CASED COLOUR MONITORS

These are again 12" RGB,
IBM compatible monitors of
medium resolution, cream
plastic case, ready to use.
Second hand but in
excellent condition.
£69.00 + £5.00 delivery.

3 1/2" DOUBLE SIDE NEC
drives still available but not
many left, will work with
the Altra ST etc
£59.50 + delivery

3 1/2" DOUBLE SIDED DOUBLE DENSITY DISK DRIVES

all by the famous Japanese
EPSON Co. All these models
in stock with makers data:
SMD 240H, SMD280H,
SMD240L, SMD180B, also
5 1/4 models SD540 &
SD580L, all brand new and
will work with most computers
and offered at
£59.50 each + £3 delivery

PRINTER PLOTTER

By Sharp. Originally listed at
£150.00 brand new with data
£16.00 + £3 delivery

PHILIPS BLACK AND WHITE MONITOR

New but uncased
£16.00 + £5.00 post

SUPER MULTITESTER

British Telecom, as new,
tested and guaranteed.
Original cost probably over
£50, yours for only £7.50.
Leather case for this
£3.00 + £3.00 post

110 WATT POWER SUPPLY

ASTEC switchmode, 230v
mains input; - 38v at 2 1/2A &
5v 3A outputs, encased and
fitted on panel mounting
plate with mains input
socket and on/off switch,
made for use with
computers. Brand new.
Price £15.00 post paid

M&B Electrical, 12 Boundary Road, Hove, Sussex BN3 4EH
Telephone 0273 430380. Fax 0273 410142. Telephone orders welcome

Arrakis Amiga Public Domain

You've seen the rest, now check this out:

Any disk 1.20
All inclusive of V.A.T. & P&P.

5-10 disks 1.05
11+ disks 0.90
DEDUCT 35p if you
supply disk
ADD 45p if TDK disk
required

No membership fee, free catalogue.

FISH, AMICUS, TBYB, SACC, FAUG, PANORAMA, DEMOS + ANY
OTHER PUBLIC DOMAIN DISK.

T.D.K. DSDD 8.00 for ten
100% Certified blank disks
4.50 for ten
80 Cap 3.5" disk box 5.00
Inclusive of V.A.T. & P&P

Send cheques/P.O.'s to:
Arrakis, 20 Ashwood House,
Victoria Road, Hendon NW4 2BD.
Ring 081-203-3854
8p.m. - 10p.m. (ask for Karl)

COMPUTALOAN

£500 - £10,000

TO SPEND

ON THAT DREAM COMPUTER, PRINTER,
HARD DRIVE, GENLOCK ETC.Call now for free quotation.
Free life cover, quick, friendly service.

Buy now for Christmas

051 347 1811 (24 hr) 051 347 1911 (6pm - 10pm)
0836 593 274 (mobile) 0426 987 5003 (pager)

Licensed credit broker, written quotes. Balmoral Finance (Agent)

THE GRAVIS SWITCHSTICK

Simply a better joystick.

Made to ■ standard not just to a price.

- Great For Simulators
- Comfortable for Hours
- Highest Quality
- Programmable Buttons
- 1 Year No Quibble Guarantee



- 8 Tension Settings
- No Click
- Ultra Fast Response
- 6 Foot Cable
- Only £39.91

R.C. SIMULATIONS/VIRTUAL REALITY

Beehive Trading Estate,

Crews Hole Road, St. George, Bristol BS5 8AY

Tel: (0272) 550900. Fax: (0272) 411052

Send S.A.E. for details.

DEMO CITY

Dept NCE, 15 The Wynd, Dunshalt, Cupar, Fife, KY14 7HE

Tel: 0337 28159

- ULTRA NEW RELEASE EXCLUSIVE TO DEMO CITY -
- THE DELIRIOUS DEMO 2 -

- STRAIGHT FROM FRANCE AND STE COMPATIBLE -
- ST Connexion Soundtracker Demo - 9 great soundtracker tracks
- ST Connexion Module Player - 5 more great tracks

Equinox Soundtracker Demo - another 5 soundtracker musixx

Also available - 5 disks full of soundtracker musixx for use with the above players and more coming soon. Forget the quality of Quartet which uses a maximum frequency of 16 KHz these soundtrackers feature 26 - 28 KHz frequency playback and the quality of sound through a Hi-Fi is amazing for a standard ST.

TO RECEIVE A COPY OF THE NEW FULLY PRINTED
DEMO CATALOGUE JUST SEND A LARGE S.A.E.

THE 'CHIP' SHOP (Semicons) Ltd

Thinking of building a computer?
Then we have all your needs.For example: 80286-12 MHZ Mother Board
Exp to 5MEG c/w 1 Meg on board £220.

Plus all the CARDS - CASES - PSU etc

And of course RAMS

1 Meg x 1-85 (ZIP) £5.00 256k x 1-20 £1.50

256k x 8-12 Simm £7.00

and the usual bargain TTL - MICRO's etc etc.

All prices include VAT. Please call or Fax for a quote.

Tel: 061 483 1989 Fax: 061 456 0078

6 Bean Leach Drive, Offerton,
Stockport, Cheshire SK2 5HZ

A & P COMPUTERS LTD

QUALITY ! RELIABILITY ! GOOD SERVICE !

IBM COMPATIBLE SYSTEMS

XT Systems *

AP88M 640K/360K FD/S/P/G/RTC/102 Keys/Mono Monitor.....£445

AP88H 640K/360K/20Mb/S/P/G/RTC/102 Keys/Mono Monitor.....£625

AP88C 640K/360K/20Mb/S/P/G/RTC/102 Keys/Colour Monitor.....£795

AT 286-16MHz Systems *

AP286M 1Mb/1.2M FD/40Mb 28ds/S/P/G/102 Keys/Mono Monitor.....£995

AP386V 1Mb/1.2M FD/40Mb 28ds/S/P/G/102 Keys/14" VGA Colour.....£1295

386-25MHz Systems *

AP386M 2Mb/1.2M FD/40Mb 28ds/S/P/G/102 Keys/14" VGA Mono.....£1595

AP386V 2Mb/1.2M FD/40Mb 28ds/S/P/G/102 Keys/14" VGA Colour.....£1795

* All systems come with MS DOS 4.01 plus GW Basic. * All prices include 1 year warranty.

DFI MOTHERBOARDS - BEST QUALITY

TOP-286 12MHz.....£175 386SX 16MHz.....£295 386-20MHz.....£525

DFI Scan HS3000+.....£149 DFI Mouse 20011.....£35 DFI VGA 3000.....£99

DFI EGA 3000.....£79 DFI Memo 2000X.....£79 DFI Memo 2000A.....£105

CGP CARDS.....£28 MGP Card.....£28 XT 1/0 S/P/G/RTC/FDC.....£35

AT 1/0 S/P/G.....£28 RS232 Card.....£15 AT WA3-16 HD/FD Card.....£75

Printer Card.....£12 XT P/D Card.....£18 XT/AT FDC 360/720/1.2.....£28

XT EXP Card.....£28 XT FDC-4.....£65 Jumbo Tape Streamer.....£235

150W PSU UL.....£45 220W L Shape.....£55 Video Frame Grabber.....£149

84 Keyboard.....£49 102 Keyboard.....£49 ■ 225 20Mb 68Ms.....£155

360K Drive.....£59 1.2M Drive.....£76 ■ 251 40Mb 28Ms.....£245

720K Drive W/F.....£59 1.44M DR W/F.....£79 Eprom Programmer EP4.....£135

XT/AT STD Case.....£59 Compact Case.....£79 Tower Case + 230W PSU.....£175

We will build a computer to your specifications at no extra cost.

Repair your PC at low rate + ■ months warranty.

All prices exclude delivery and VAT charges.

Specifications and prices may be changed without notice.

A & P COMPUTERS LTD

35 WALNUT TREE CLOSE, GUILDFORD, SURREY GU1 4UN

TEL: 0483 304118

FAX: 0483 304124

The South West
Software LibraryPublic Domain Software
for the Atari ST

Software tools from ARC to ZOO - and so much more. The best catalogue (current update level 5.1) and fast friendly service.

Write:

The South West Software Library

PO Box 562, Wimborne, Dorset. BH21 2YD

2400 Modem V21, V23, V22 BIS
Hayes Compatible
Voice Over £150.00 o.n.o.
TELEPHONE (0273) 550300

GRAPHICS, DTP & CLIP ART

HEADLINES [.PCX/IMG] £29.95

Attention-getting graphics for adverts, newsletters etc.

BORDERS [.PCX/IMG] £29.95

Decorative borders and panels for all uses.

A WIDE RANGE OF ORIGINAL CLIP ART
PLUS GRAPHICS SOFTWARE AND HARDWARE
Formats for MOST Major DTP Programs
available by arrangementCUSTOM DTP CLIP ART, DESIGN
ILLUSTRATION & SCANNING

Prices exclude postage and VAT and may change

Call or Write for further details and FREE CATALOGUE

WORDS &
PICTURESPO BOX 142,
BANBURY,
OXON
OX16 8XQ(0295)
258335

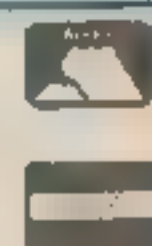
Dowling

MAIL ORDER DIVISION

COMPUTERS

HEAD OFFICE:

Unit 48
Tyne Road
Sandy, Beds, SG19 1RB
Tel: 0767 681750/60
Fax: 0767 681730



FORGET THE REST TRUST THE BEST!

AMIGA DEALS

STANDARD PACK:- Amiga 500 computer, Mouse, Modulator, Power Supply, Operating Manuals & Disks etc

ONLY
£339.95

TENSTAR GAMES PACK - ONLY AVAILABLE WHEN PURCHASING AN AMIGA

★TEN STAR★ COMPRISING
ALL TEN GAMES FOR JUST **£24.95**
★ Ikari Warriors ★ Buggy Boy
★ Wizball ★ Terrorpods
★ Barbarian ★ Thundercats ★
Art of Chess ★ Amegas ★
Insanity Flight ★ Mercenary

BATMAN PACK +	FLIGHT OF FANTASY +	ULTIMATE GAMES PACK
<ul style="list-style-type: none"> ★ Amiga Computer as in Standard Pack ★ Batman The Movie ★ F18 Interceptor ★ New Zealand Story ★ Deluxe Paint II ★ Tenstar Games Pack 	<ul style="list-style-type: none"> ★ Amiga computer as in Standard Pack ★ F29 Retaliator ★ Rainbow Islands ★ Escape from the Planet of the Robot Monster ★ Deluxe Paint II ★ Tenstar Games Pack 	<ul style="list-style-type: none"> ★ Amiga Computer as in Standard Pack ★ F29 Retaliator ★ Rainbow Islands ★ Batman The Movie ★ F18 Interceptor ★ New Zealand Story ★ Deluxe Paint II ★ Escape from the planet of the Robot Monster ★ Tenstar Games Pack ★ Megablast Joystick ★ High Quality Dust Cover ★ High quality mouse Mat
ONLY £369.95	ONLY £369.95	ONLY £399.95

NEW PROFESSIONAL BUSINESS PACK

★ Amiga 500 computer as in standard pack.
★ Kindwords II wordprocessor (RRP £49.95)
★ Superbase Personal II, Database (RRP £99.95)
★ Maxiplan Spreadsheet (RRP £99.95)
★ Box of ten MF2DD branded disks (RRP £12.99)
This pack usually sells for over £660

OUR PRICE
£429.95

NEW PROFESSIONAL ART & MUSIC PACK

★ Amiga 500 computer as in standard pack
★ Music X software package (RRP £229.95)
★ Photon Paint II - latest version (RRP £79.95)
This pack usually sells for over £700

OUR PRICE
£429.95

NB: Music X is the full blown UK version, do not confuse with inferior versions or "Music X Junior"

THE **Star**
COMPUTER PRINTERS



Being Star registered dealers we only sell official UK machines which come with a full 1 year guarantee. Beware of inferior imported products

OFFICIAL U.K VERSIONS	RRP	OUR PRICE
STAR LC10 mono 144/36 C.P.S	£229.95	£149.95
STAR LC10 II 25% faster version	£263.35	£169.95
STAR LC10 Colour, 7 colours	£297.85	£189.95
STAR LC24-10- 24 pin multifont	£343.85	£229.95
STAR LC10 Sheet Feeder (auto)	£74.75	£59.95
STAR LC10 Mono Ribbons	£5.95	£3.95
STAR LC10 Colour Ribbons	£7.95	£5.95
STAR LC24-10 Ribbons	£7.95	£5.95
STAR LC10 Quality Dust Cover	£7.95	£5.95



MUSIC SCOOP



We have packaged the best MUSIC SOFTWARE for the Amiga together with the best MIDI interface on the market. Look at what you get: **MUSIC-X** widely acclaimed as the most comprehensive and easy to use professional music utility for the Amiga.
RRP £229.95.

MIDI INTERFACE 2 Latest high quality product from Trilogic offering a total of FIVE MIDI sockets alleviating the need for lead swapping once connected to a MIDI system.
RRP £34.95.

MIDI LEAD 1 metre lead allowing you to set up and get going!
RRP £4.99

This total package would normally cost you over £269 but we are literally giving them away at the incredible price of:

£99.95

Music-X available separately at £79.95
HURRY - STOCKS LIMITED ON A FIRST COME FIRST SERVED BASIS!

AMIGA 1010 DISK-DRIVE SCOOP!

★ Original Commodore Disk drive
★ Robust Design
★ High quality & reliability
★ Full Commodore 1 year guarantee
OUR PRICE £59.95
RRP £149.95

★ ★ EXTRA SUMMER SEASON OFFER ★ ★
Above Amiga 1010 Drive
Available with our 1/2 meg
RAM expansion board (inc clock)
FOR ONLY

★ 3 1/2" DISKS ★ 3 1/2" DISKS ★ ★ 3 1/2" DISKS ★

All our disks are of the highest quality, are 100% certified and are individually wrapped. We guarantee each disk is either Sony, TDK or Verbatim unbranded.

50	£26.99
100	£49.99
200	£89.99
400	£169.99

PERIPHERALS, ACCESSORIES AND SERIOUS SOFTWARE

FOR THE MORE DISCERNING COMPUTER USER	RRP	OUR PRICE
Commodore 1084S Stereo Monitor	£299.95	£249.95
Cumana 1 meg Quality Drive - The best	£89.99	£69.99
High Quality Amiga Dust Cover	£9.95	£5.95
High Quality 1084S Dust Cover	£12.95	£6.95
Replacement Amiga Power Supply	£59.95	£39.95
Kindwords 2 wordprocessor	£49.95	£29.95
Superbase Personal 2	£99.95	£29.95
Maxiplan Spreadsheet	£99.95	£29.95
Photon Paint 2 - Latest Version	£79.95	£29.95
Deluxe Paint II - Excellent Value	£49.95	£9.95
Aegis Sonix version 2	£69.99	£29.99

Why Dowling?

Here are just a few reasons why customers prefer us

★ First and foremost We really CARE about our customers' needs

★ ALL OUR STAFF are trained to give a friendly personal service.

★ EMPLOYING ENGINEERS ourselves, we won't send repairs away for weeks on end!

★ That's why we at Dowling say
"FORGET THE REST TRUST THE BEST"

MID-SUMMER CLEARANCE OFFERS

HURRY AS STOCKS LIMITED TO QUANTITIES SHOWN

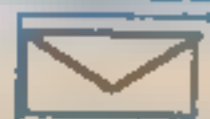
ALL PRICES INC VAT PLUS A FULL 1 YEAR GUARANTEE

1084S STEREO MONITOR Inc. Amiga cables £229.95 RRP £299 Qty 14	PHILIPS 8801 COLOUR MONITOR Inc. ST lead + 1 years on-site maintenance £199.95 RRP £269 Qty 12	ATARI 520STE "New enhanced version" with 1 Meg RAM £329.95 RRP £499 Qty 8	ATARI 520STE "New enhanced version" with 2 Meg RAM £399.95 RRP £599 Qty 11
ATARI MEGAFILE 20 Hard Disk £349.95 RRP £499 Qty 3	AMIGA 1010 Disk Drive "Official Commodore Amiga drive" £59.95 RRP £149 Qty 80	SEIKOSHA GP100 PRINTER Dot Matrix Tractor Feed only £79.95 RRP £149 Qty 9	AMSTRAD FX5000 FAX MACHINE "Top of the range" £349 + VAT RRP £399 + VAT Qty 6
AMSTRAD FX9600T FAX MACHINE "Top of the range" £499 + VAT RRP £599 + VAT Qty 12	PC10 DUAL DRIVE + MONO MONITOR "Starter Kit" £529 + VAT RRP £599 + VAT Qty 3	SPECTRUM + 3 "ACTION PACK" £159.95 RRP £199 Qty 4	DEFENDER LIGHTGUN + 6 games for Spectrum 128/+2/+3 £14.95 RRP £24.95 Qty 65
SONY 3 1/2" DISKS Box of ten branded Sony disks £9.99 RRP £14.99 Qty 30	COMMODORE 64 "WORLD CUP PACK" £139.95 RRP £159 Qty 8	COMMODORE 64 "ENTERTAINMENT PACK" Inc. Yamaha keyboard, personal stereo £149.95 RRP £199 Qty 5	ATARI ST METACOMCO BASIC £5.00 RRP £24.95 Qty 27
AMIGA DELUXE PAINT II £9.99 RRP £49.95 Qty 31	COMMODORE 64 1541 MK II DISK DRIVE £125.00 RRP £179.95 Qty 3	CUMANA DISK DRIVE ST/AMIGA £69.95 RRP £99.95 Qty 32	SHADOW of the BEAST Including T-shirt (Amiga) £9.99 RRP £34.99 Qty 46
★ AMIGA GAMES ★ Obliterator£3.99 Barbarian£3.99 Conflict in Europe...£3.99 Ballistix£3.99	★ AMIGA GAMES ★ Driller£3.99 Dark Castle£3.99 Deflektor£3.99 RRP £25 Qty 100	ATARI ST HYPERPAINT PLUS HYPERDRAW £29.95 RRP £80 Qty 24	ATARI 520STFM "POWERPACK" Inc. over 20 games £299.95 RRP £399 Qty 8

**ORDERING
MADE EASY**



Order by phone by calling our Head Office
quoting your Access/Visa Number



Order by Post - make Cheques, Building Society Drafts
or Postal Orders payable to Dowling Computers

Add £6.00 courier delivery for all orders over £100.00 (UK mainland only). Add £2 for orders under £100.00

DOES anyone know of an ST user club in the Wirral/Merseyside area that is open to membership? Please ring 051 678 8519.

DOES anyone know of an ST user group in the Reading / Wokingham area? If so please phone: Matthew by Tel: 0734 788085.

GWYNEDD, N. WALES. ST User Group. I want to get in touch with all local ST Users to form a new group. Contact S. Rammerling, Clogwyn Plas Gwyn, Pwllheli, Gwynedd, N. Wales, LL5 36UA.

HYPERPAD - interested in forming a user group? SAE to Dave Langstaff, 78 Harrison Road, Swaythling, Southampton, SD2 37J.

IF You want to spread your groups in Asia. Send your latest + your demos to: Tariq, P.O. Box 3581 Safat, 13036, Kuwait. 100% reply, Amiga Only. Also will swap spot.

IS there a Clipper/DBase 3+ User Group in London? I will be grateful for any details. Guy Ellis, 23 Sussex St., Pimlico, London, SW1V 4RR.

ISLE OF WIGHT PC User Group. Anybody wishing to join should contact I.O.W. 0983 614277/614649 and ask for Sean.

JOIN CMUG the best Christian Micro Users Group. S.A.E. please to CMUG, 15 Howard Street, Gloucester GL1 4US.

JOIN the first free national ST user club. Register now! Make the most of your ST. David Dean, 5 Alpine Drive, Hednesford, Cannock, Staffs, WJ12 5NL.

KENT youth computer group in the Bowen Youth Centre, Kingsnorth Road, Ashford, Kent. All makes of computer. Write to Kris for details.

LAMER? Want to swap software, tips, demos and form a Lamers against Lamers Society? Then contact, Faisal Patel, 73 Track Road, Batley, W. Yorks, WF17 7AB.

LIST the low income ST User Group for stu-

dents and the unemployed send two blank disks to Marcus, 9 Days Green, Chapel Street Mary, Ipswich, Suffolk IP9 2HZ for details.

NINTENDO contacts wanted for swaps and setting up of User Group! Write to: Ashley Middleton, Amberley, Park Drive, Little Aston Park, Sutton Coldfield, B74 27A, 100% reply.

PC200 user I think it's OK! Did you buy the other one? What do you think of it? Give me a ring 0432 266451 Neil.

PCW Users Interested in P.D. send S.A.E. to: PCW-File, 18 Sunbrow, Haslemere, Surrey GU27 2QP. The PCW-File is on Boog BBS 0252 626233, 24hrs, V21/V23. No Fees.

READ this now! Amiga contacts wanted to start a group or just swap stuff. Contact Phil at 52 Altofts Lodge, Drive Normanton, West Yorks WF6 2LD. No lamers!!!

SCOTTISH QL Users Group. Your chance to meet other QL and Thor users north of the border. Contact Alan Pemberton, 65 Lingerwood Road, Newtongrange, Midlothian, Scotland.

SHARP users. Sharp users club, any model. The only one left for full support. Andrew Ferguson, 11 Harcourt Close, Henley-on-Thames, Oxon, RG9 1UZ. (0491) 514850 evenings please.

SOLIHULL, West Midlands Atari ST User Group meet second Tuesday of every month, other machines also accepted especially ARC's and even Amiga's. Phone 0564 770132 after 6.30 ask for Richard.

SPECTRUM Owners Join Indug, the World's largest Spectrum Users Group. Monthly Magazine, Discounts, Support + much more. Send A5 S.A.E. for full details. INDUG, 34 Bourton Road, Gloucester, GL4 0LE.

SPECTRUM User Group monthly magazine

hints, tips, pokes & demos. For full details send S.A.E. to Rob Tronics, 61 Doyle Road, Bolton BL3 4SA.

INTERESTED in joining a Kick Off League in London? With trophies for winners? Contact Ray at 30 Windsor Crescent, Wembley Park, Middlesex, HA9 9AW or ring 01 904 0555 between 6pm-11pm.

ST user: Help!, I'm Australian and have just bought an ST (used to own a C64 in Oz) Anyway, I am looking for good contacts and also anyone in Bradford interested in starting a users group. Contact David Marshall, 5 Highfield Road, Five Lane Ends, Bradford, W. Yorks.

ST users in Bradford, I'm starting a users group, just contact Dave on: 614945 and get the most out of your ST. NO FEES!!

THE Computer Information Club. A Club for PCW, PC, CPC, Spec+ and Atari, producing a Newsletter with hints, tips and discover software. Contact The Editor, 345 Western Way, Letchworth, Herts.

T199/4A User Group. Quarterly Mag, software Libraries. Membership Secretary: Peter Walker, 24 Bacons Drive, Cuffley, Herts EN6 4DU. T199/4A lives on yet!!

● HELP OFFERED

"DUNGEON Master", any problem, any level. Completed 7 times! ST/Amiga. Will assist any way I can. Please phone (most evenings 7-10pm) (Weekends) Mike: 0743 249094. (Also SSIs - "Rings of Zilfin" and "Sword of Sodor").

ANYONE with PC hardware/software compatibility problems or having trouble deciding which PC compatible to buy. Call Paul on 061-962 7934, evenings. Completely free service!

BEEB help offered, including BCPL Basic

and machine code. Write to Owen Astley, Dunelm, Durham Moor, Durham City, DH1 5EU. No SAE, no reply

COMPUTER freak offers help with any BBC B problems, however complex, also on use of DEC VAX 8800 in DCL, Pascal, ADA. S.A.E. to T.F.T., 5 Riversdale, Gilsland, Cumbria. Also 6502 work undertaken.

DO you need programs written on the Amstrad CPC range? Write to me now! Keith Grimsditch, 12 Reddish Vale Road, Reddish, Stockport, SY5 7HE. The sooner the better!

HELP given on Indy Jones the Adventure, also Dungeon Master. Please phone Paul on 0222 567596. Hi to the Pompey Pirates keep up the good work.

I can help with spares for Amstrad Commodore Sinclair computers, also TV and Video recorders. Can anyone help new Amiga operator? Ring Paul on 0332 760353.

OMEONE who can video digitise photos, mags etc..... will gladly sound sample anything they want done - write now! To: Neil Mansell, 53 St Marks Road, Canvey Island, Essex, S58 9NJ - don't delay!

STUDENT offers help with all aspects of MS-DOS, including Batch Files and Pipes/Filters. Send Query to: N Stubbs, 6 Lindrum Ave, Lyme Green, Macclesfield, SK11 0LG

TO all Pascal programmers: If you have any problems or just want to write something. Send me a letter and I will try to help you! To: Sioe-Lin Kwik, Richmond College, Queensroad, Richmond, Surrey, TW10 6JP.

TO PCW beginners. Locoscript, Newsdesk International. SAE to: John Peters, 299 Southway Drive, Southway, Plymouth, Devon, PL1 6QN. Share a problem, find an answer!

WANT help with any Amiga Software? Contact Pete, 15 Milford Close, Tonteg, Mid Glam, S. Wales, CF38 1HG.

ATARI ST ★ ATARI ST ★ ATARI ST ★ ATARI ST ★ ATARI

A brilliant offer for readers of New Computer Express!

Devpac ST 2

FROM HISOFT ONLY £44.95

Devpac ST Version 2 is widely regarded as the most powerful assembly language development system for the Atari ST. It incorporates a debugger, stand-alone assembler and a fast linker

IT INCLUDES:

- **GenST** Assembler is a high-performance, full-featured, two-pass Motorola standard macro assembler at up to 75,000 lines per minute. It has multiple modules and sections, repeat loops and macro calls that maybe nested as deeply as memory allows.
- **MonST** Debugger is an advanced symbolic monitor, debugger and disassembler. Now in addition it can offer Multiple window display, full expression evaluator, up to 22 significant characters in symbols, viewing of source files and conditional breakpoints.
- **Example Files** of a wide variety including a full GEM type windowing application and an example desk accessory.

The package comes complete with an extensive ring-bound manual plus notes on the various operating system levels and debugging strategies.

Order now by phone from the NCE mail order service or send the coupon to our FREEPOST address.

HOTLINE NUMBER 0458 74011

DevpacST 2

version 2

Complete Assembler/Debugger System
for the Atari ST Computers

**SAVE
£15**

Yes, I would like to order a copy of
Devpac ST 2

Name

Address

Tel No

I would like to pay by **Access Visa**
Cheque PO

Please debit my credit card

No

Expiry Date

Tel. No

Send & make cheques payable to
Future Publishing, FREEPOST, The Old
Barn, SOMERTON, Somerset. TA11 7BR

PLACE AN AD FREE!

Selling an old computer?
Need some help?
Got any tips?
Run a bulletin board?
In charge of a consumer group?
After a second-hand bargain?

● You've come to the right place. Just fill in the form to place a free classified advertisement in Shopping Express

● Send your reader ad to:
Reader Ads Department
New Computer Express
30 Monmouth Street,
Bath BA1 2AP

READER ADS ORDER FORM

PLEASE TICK THE CATEGORY YOU WANT YOUR AD TO GO IN:

- | | | | |
|--|---------------------------------------|--------------------------------------|--|
| <input type="checkbox"/> HELP OFFERED | <input type="checkbox"/> GOODS WANTED | <input type="checkbox"/> USER GROUPS | <input type="checkbox"/> BULLETIN BOARDS |
| <input type="checkbox"/> BUGS DISCOVERED | <input type="checkbox"/> EVENTS | <input type="checkbox"/> SERVICES | <input type="checkbox"/> VIRUS WARNIG |
| <input type="checkbox"/> ANNOUNCEMENTS | <input type="checkbox"/> MINI-TIPS | <input type="checkbox"/> FOR SALE | <input type="checkbox"/> PERSONAL |

NAME _____

ADDRESS _____

TEL: _____

Terms and conditions

■ Sorry, NO trade ads. All reader ads must be from private individuals
■ We cannot vouch for the quality of goods and/or services offered in this section. all ads are accepted in good faith.

■ We reserve the right to amend or refuse reader ads at our discretion

■ No pirated software may be sold through these columns. Any reader being offered non-originals should contact us

■ We cannot guarantee that reader ads will appear in particular issues
■ Express

■ The following declaration should be signed:

My advertisement conforms to the terms above and is legal, decent, honest and truthful

Signed _____

There's plenty out there for the ST user, but how do you know exactly what to get? I mean, there's so much stuff it's easy to get lost in the vast sea of PD software. Well, these pages should hopefully be something of a guide to what's available, but there's nothing like seeing it in the first person.

Buzzbox ■ a disk-based magazine totally devoted to PD on the ST. It comes out on the first of every month, and it aims to tell you about the very best PD around.

There's plenty to read, including editorial, reviews, and letters as well as a jokey humorous section. The text tends to be a bit on the short side, but the disk is really meant to be read by the computer, not you.

A PD magazine just wouldn't be complete without a little PD. And there's plenty on offer here, from all the best libraries in town.

All the PD proggies are archived, the result being a jam-packed disk. On the minus side, it means you can't run the programs directly.

You need to copy the programs onto a blank disk, and put them through the de-archiver program first. Luckily it's easy enough to use.

Copy both the de-archiver and the program you want to use onto the disk.

THE PD COLUMN

Adam Waring's latest offering leads the reader into new arenas for the ST and Spectrum computers. Sit back, sit tight and let him be your sherpa as you climb that mountain known as Budget Computing...

Boot up the de-archiver and type in the file name. The program - in some cases several programs - are extracted and after a couple of minutes are sitting on your disk, ready for use.

The software on offer includes demos, utilities and games. It's a varied selection, and should have something for everyone. The Buzzbox disk is formatted ■ double-sided capacity.

This latter detail is good news for the majority of ST owners, as it allows there to be so much crammed on the disk. However, those of you with the earlier single-sided 520s, will have to go without, I'm afraid.

CORE WARS

Imagine the scenario. Your enemy's out

there somewhere, hiding. You don't know where, but then again, they don't know where you are either. It's a battle of wits, you've got to get them, before they get you.

So what's this? The latest PD game? Not quite. It is a game of sorts, but you don't play. The contestants are computer programs.

It goes something like this. Two programs sit in memory. The computer processes one instruction from each program ■ turn.

The programs are designed to search out and destroy each other, while keeping themselves intact. The winner is declared when the other program is inoperative. There you have it: *Core Wars*.

In the bad old days of mainframes, programmers got bored of playing mindless text-based games all day. So they designed a game that tested their skills to the limit.

A simple programming language is used. It's rather like machine code, but has only 10 instructions. A central program is the referee.

It places the programs at ■ random point in the memory where the battle is to take place. Then it runs the battle and decides when the loser has been destroyed.

Despite the simplicity of the language, the programs are constructed to be very devious indeed. A simple one may just sit tight at the place it was put and blot out areas of memory randomly

I-C-P-U-G

the Independent
Commodore Products Users Group
is the largest and most friendly
computer club in the country

- ★ Over 600 disks of Amiga Public Domain Software entirely free to members - you supply blank disks and pay only for postage
- ★ Superb magazine published every two months - keep up to date with latest Amiga hints and tips. Get the news from America first!
- ★ Meet other Amiga users at one of our many local groups which meet regularly all over the country
- ★ Help and advice services - hardware or software problems can be quickly resolved
- ★ Discount scheme makes purchases easier! Save money on hardware add-ons and software.
- ★ Before requesting any software, please wait for your membership details to be sent to you.
- ★ Overseas prices on application.
- ★ Want to have a look before committing yourself? Back issues of the magazine from 1988 to all at £2 each.
- ★ We support ALL Commodore machines with extensive software libraries and help services.

If you are seriously interested in using or programming your Amiga, or indeed any Commodore Computer, then joining ICPUG is a must!



For full details send a stamped addressed envelope ■

ICPUG Membership Secretary, Jack B. Cohen,
PO BOX 1309, LONDON N3 2UT
081-346 0050 Evenings and Weekends



MAIL ORDER DISKS NEW LOWER PRICES

All prices include fast FREE delivery in mainland UK

BRANDED DISKS

Prices per box of 10 disks	1-4	5-9	10-49	50+
TDK 5.25" M2D DS/DD 48TPi	£5.50	£5.20	£5.00	£4.70
TDK 5.25" M2HD DS/HD 1.6Mb	£9.40	£8.90	£8.50	£8.00
TDK 3.5" MF2DD DS/DD 135TPi	£10.00	£9.50	£9.00	£8.50
TDK 3.5" MF2HD DS/HD 2Mb	£24.20	£23.00	£21.80	£20.60

Prices per box of 10 disks	1-4	5-9	10-49	50+
KAO 5.25" MD2D DS/DD 48TPi	£5.20	£4.90	£4.70	£4.40
KAO 5.25" MD2HD DS/HD 1.6Mb	£9.20	£8.70	£8.30	£7.80
KAO 3.5" MF2DD DS/DD 135TPi	£9.40	£8.90	£8.50	£8.00
KAO 3.5" MF2 HD DS/HD 2Mb	£20.20	£19.20	£18.20	£17.20

BULK PACKED DISKS

TOP QUALITY CERTIFIED DISKS

Prices per disk	10-49	50-99	100-399	400+
5.25" DS/DD 48TPi	£0.30	£0.28	£0.27	£0.25
5.25" DS/HD 1.6Mb	£0.74	£0.70	£0.66	£0.62
3.5" DS/DD 135TPi	£0.59	£0.56	£0.53	£0.50
3.5" DS/HD 2Mb	£1.44	£1.37	£1.30	£1.22

**SOFT
SYSTEMS
ENTERPRISES**

38 Bryland Ave,
Bishopston,
BRISTOL,
Tel: (0272)
247666

All prices exclude VAT.
Cash/Cheques/PO with order.
Accounts available.
All prices and products subject to
change without notice.

in the hopes of scoring a direct hit.

Others may replicate themselves, building up copies and then transferring control to one of their clones.

The ST implementation was written by Steven Tavener in STOS BASIC. It allows you to run up to five programs concurrently. Control is via the mouse and pointer, and after a quick scan through the documentation file, you should be ready to start.

Understandably perhaps, you may not want to jump straight into designing your own automated assassin. A large selection of pre-defined fighters are included on the disk, and you can load those in for the initial silicon skirmishes.

I decided to recreate the battle of five armies, choosing Jujitsu, Cancer, Dwarf, Mice and Worm as combatants. It was a close thing, but Mice and Cancer cleanly saw off the opposition. It ended up as a draw between those two.

The program is well designed. It is easy to get around in, and the nice front-end makes it particularly user friendly. You can mess around with the programs parameters, and add your own variants to play.

In the battle mode, you can either select as straight battle between all contestants, or opt for a tournament.

The tournament is the fairest way to decide which program is better.

Whereas in the straight battle, a poorly designed program can get lucky and wipe out even the mightiest opponent. The tournament plays two of the psychopathic programs in a head-to-head for the best out of three.

Then another two play, and so on until all have played each other three times. The program with the most victories is then declared the winner.

Core Wars is a worthwhile addition to any ST owners collection. It's available on your ST courtesy of The South West Software Library. The good people there know it simply as disk 977, and they will be glad to send you a copy for the sum of £3.

SPECTRUM

8-Bit Back-up is a team of writers who produce the *Re-Run* fanzine. This group has just started to offer a public domain service to its readers. It's not grown to epic proportions yet, but hopes are very high indeed.

8-Bit Back-up covers all machines with bits that total eight, and I have just received a couple of programs from the group for that most popular machine, the Spectrum.

General Knowledge Quiz is, erm, a general knowledge quiz. Up to eight players can participate in the action, but they'll have to be prepared to test their

little grey cells to the limit.

The players take it in turns to answer questions. They have to be pretty good at spelling too, as the computer expects you to type the answers in exactly right.

It's fairly basic stuff, but it's hoped that the library will grow in quality as well as size.

Readers of the fanzine are invited to send in their own programs. Prices – which include a tape, P&P, and a copying charge – are usually around a single pound.

You can obtain more details by the sending of 25p plus a large stamped addressed envelope. Mark the letter *Re-Run*, issue 2 as that's the copy with the PD list in.

SEND IT IN!

Does your PD library have software so hot that it's cutting your fuel bills in half?

If you answered yes to the first and yes, you bet, to the second of these questions, then we'd like to see what you have to offer for use in the public domain.

Of course we want to see your absolute best stuff – preferably on disk. We cater for all the major formats, and a few more besides, so whatever machine it runs on, send it in!

Oh, and before you put that Jiffy

bag in the post, make sure you include all those ultra-important details like your name, your prices, your address, your catalogue...

Our address, as if you didn't know already, is The PD Column, *New Computer Express*, Beauford Court, 30 Monmouth Street, Bath BA1 2AP.

WHERE TO GO

• *Buzzbox Computing*, 5 Balmoral Road, Moorlands, Lancaster, Lancs. LA1 3BT.

Publisher of *Buzzbox*, a disk-based PD magazine. Each issue includes a selection of PD from various PD libraries. The price is £2 an issue, including postage.

• 8-Bit Backup, 1 Northlome Close, Grays, Essex. RM16 2NX.

Send the paltry sum of 25p and a large SAE to this address, and you'll receive the *Re-Run* fanzine.

Inside this fabulous fanzine, as well as all that's good on eight bit, is the group's PD list. Remember to mark your envelope *Re-Run* ISSUE 2, or they won't know what to send you.

• The South West Software Library, PO Box 562, Wimborne, Dorset BH21 2YD.

Software and shareware for the ST, including the rather super *Core Wars* program. Each disk you order will cost you £3. Order four or more and the price drops to £2.50. ■



ONCE BYTTEN

39 Marling Way
Gravesend
Kent DA12 4DW
Tel: 0474 567964 Fax: 0474 537172
Mon-Sat 10am-8pm Callers by Appointment

PROFEX

LOCOSCRIPT PC

PC version of the famous Locoscript WP programme. A fully integrated WordProcessor, Mail-merge, Database, Report Writer & Spell Checker. **ONLY £99.00**

DESK PRESS

The latest high-power DTP package from TIMEWORKS/GST. Full featured but not full priced! **RRP £320. OUR PRICE £250**

PROFEX

The superb range of PROFEX PCs are coming into stock now. This brilliant series of machines from West Germany start from a 12Mhz 286 up to 486 25Mhz. That's impressive, what's more impressive is the prices. The first to be available is the PC33 this is a 12Mhz AT 286 with 33Mb HDD 1 x 3.5" & 1 x 5.25" FDD, MS-DOS 3.30, VGA graphics & VGA Colour Monitor for only **£1199 + VAT**

The PROFEX range includes printers, cards, monitors, and discs. Please ask for details.

X-COPY II version 2.9

This is the latest official version of X-Copy II (Includes Cyclone II v 6.41) Backup your expensive originals with X-Copy II
X-Copy II with Hardware **£29.95 inc VAT P&P**
X-Copy II with External Drive **£89.95 inc.**

USED EQUIPMENT

AMIGA A1000	£295.00	SIDECAR	£199.00
AMIGA B2000	£695.00	30Mb HDD	£250.00
8Mb Board (2Mb)	£195.00	1084S	£179.00
CSA 68020	£350.00	Minigen	£69.00
Zxx + PC Link	£150.00	Golem 2Mb (A1000)	£199.00

AMIGA 2000 UPGRADE

Even though Commodore have finished their upgrade offer **WE** haven't.....Our upgrading continues throughout the year. Tell us the kit you want to purchase and we will make you a Super Offer on your A500/A1000 or PC.

PROFEX HD3300 for A500

This 33Mb Autoboot Hard Drive from West Germany is now available from stock. It is in a beautiful slimline case with a separate PSU (a la A590) but only costs **£349.00**

GVP products for Amiga 2000

GVP items currently in stock include:
A3000 28Mhz 68030/68882 Processor Board at only **£850.00**
IMPACT 40Mb Quantum IIms Hard Card with 2Mb RAM (OK fitted) **£499.00**
or with 2Mb fitted **£689.00**

Please ask for details and pricing of any products you don't see here, if we haven't got it we can always get it - fast.

PART-EXCHANGE (16 Bit only)

We are part-exchange specialists and are always interested in 'doing a deal'. Please ask for Keith McGovern our Trade-in specialist. He will also make you an offer if you just want to sell any equipment.

CARRIAGE

Carriage is extra on all the above items. Software £2.50 Small Hardware £5.00 Computers, Monitors, Printers £8.00 Courier Delivery. Maximum charge £24.00

EXPERIENCED

BEAT THIS AMIGA PD

Free Club Membership

Write now for details of July/August FREE PD DISK offer

ANY OF OUR PD DISKS FOR ONLY **£1.75**

☆ 1 - 4 Disks £1.75 ☆ 5 - 9 Disks £1.70 ☆
☆ 10 - 24 Disks £1.60 ☆ 25+ Disks £1.50 ☆
We have several **Special Offer Packs** at low prices

e.g. ☆ Home Business Pack (8 disks) only **£12.99**
includes: Home & Business Accounts, Database, Disk Label Printer, Wordprocessor + dictionary, Spreadsheet scheduler and even more...! (Best selling pack)
☆ Sonix music pack (5 disks) **£7.99**
☆ Star Trek demos and game pack - 1 meg (6 disks) **£9.50**

WE ALSO HAVE 3.5" BLANK DISCS IN STOCK

10 Blank disks + 1 FREE PD disk£8.00
25 Blank disks + 3 FREE PD disks.....£19.00
50 Blank disks + 5 FREE PD disks.....£35.00
Choose your FREE PD disks from any in our list

Prices include 1st Class P&P. Orders nearly always despatched the Same Day.
Send a S.A.E. for a copy of our PD software lists. Make Cheques Payable to:

BEAT THIS AMIGA P.D.

Dept NCE, 5 Fullarton Drive
Troon, Ayrshire
KA10 6LE
Scotland

E VALUE

FAST & EFFICIENT

W
A
N
T
E
D

Talented freelance
16 bit Graphic
Artist to produce
fantasy/graphic
adventure sprite &
backgrounds for
exciting interactive
media project.

Please send ST:
Amiga or MS-DOS
demos discs to:

Tony Warriner
Jagged Software
10, Elloughton
Road,
Brough HU15 1AE

GRAPHICS MANAGER GRAPHIC ARTISTS

Required for full time employment,
at our West Manchester offices.

If you have experience of
producing professional
graphics for computer games
and would like to apply,

ring 061 728 2282

between 2pm-5pm
any weekday

and ask for JAY GEE



MR.

MICRO

Future
PUBLISHING

Games Reviewer

Salary range around £8000

Britain's leading publisher of
computer magazines needs another
games reviewer. If you:

- Eat, sleep, and dream computer games
- Frequently hit the high score tables
- Can demonstrate the ability to write informatively and humorously
- And are at least 18 years old with some decent qualifications, then you just might be the sort of person we're looking for.

If you think you fit the bill, send your CV and examples of your writing – a 300-word game review, plus a 300-word 'think' piece about a subject of your own choice – to Steve Jarratt at the address below.

- Launched in 1985
- Now over 130 staff
- 10 national newsstand magazines
- Market leader in computer titles
- Exciting launch plans
- Britain's fastest-growing publisher

Future Publishing Ltd, Beauford Court, 30 Monmouth Street, Bath, BA1 2AP
Tel: (0225) 442244

DO YOU WANT TO BECOME A PROGRAMMER?



Established 1968

**Move across to the rewarding
world of IT.**

We have a series of short and long
term training programmers in
Computing and Information
Processing.

- * C & G 424/425 Certificate in applications programming.
- * C & G 418 Computer Programming & Information Processing.
- * Evening courses in DBASE, WP, Spreadsheet Analysis.
- * Evening courses in Pascal, BASIC & COBOL.

**Contact Central London College on
01-580 4596.**

TRAINING FOR YOUR FUTURE

Amiga Programmers

The MultiMedia Corporation, an associated company of the BBC, is developing a range of titles for consumer markets on CD-ROM. We have an immediate opening for an outstanding Amiga programmer to join our team of producers, designers and software engineers at our new premises in Primrose Hill. Candidates must be fluent in C, thoroughly familiar with the Amiga development environment and enthusiastic to pioneer multimedia publishing.

Preference will be given to candidates with a training in computer science and who can show examples of published work. Write in confidence to:

Ted Barnes, The MultiMedia Corporation
109X Regents Park Road, London NW1 8UR
or ring 071-722-7595

MICRODIAL

ATARI

520STFM DISCOVERY PACK	£279.00
520STE POWER PACK	£369.00
1040STE BUSINESS PACK	£460.00
PORTFOLIO	£229.00
LYNX	£165.00

COMMODORE

AMIGA A500 BATMAN PACK	£369.00
A500 FLIGHT OF FANTASY PACK	£369.00
A500 CLASS OF THE 90'S PACK	£515.00
M501 1/2 MEG UPGRADE INC CLOCK & GAME	£75.00
C64 WORLD CUP PACK	£150.00
PC STARTER PACK	PLEASE PHONE

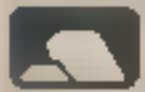
PRINTERS

STAR LC-10	£169.00
STAR LC-24/10	£249.00
MANNESMANN TALLY MT81	£147.00
CITIZEN 120D	£125.00
SEIKOSHA SP2000	£199.00

SOFTWARE UP TO 20% OFF RRP

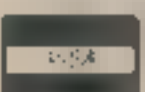
THIS IS A SMALL SELECTION OF OUR WIDE RANGE - PLEASE PHONE - WE WILL TRY TO MATCH ANY PRICE

All prices include VAT and P&P,
Courier Delivery add £8.



Please make cheques, P.O.'s payable to "MICRODIAL" and send to:

THE OLD CAMP SHOP, WARRINGTON LANE, ADGEN WHARF, LYMM, WARRINGTON, WA13 0SW.



All items are subject to availability, prices are subject to change without notice. All goods despatched upon cleared payment. Proprietors: Mike Todd and Mal Neary. E. & O. E.

24 HOUR ORDER LINE 0925 75 7696



MERLIN COMPUTERS

OUR PRICES ARE MAGIC

AMIGA 500 ONLY £379.00 INC BATMAN PACK

ATARI 520 STFM POWER PACK£359.99

TRY THE ST'S MIDI POWER

CASIO MT 240 AN EXCELLENT LOW COST MIDI KEYBOARD £89.99
OTHER CASIO KEYBOARDS ALSO AVAILABLE

1 MEG 3.5" DISK DRIVES AMIGA	£69.99
1 MEG 3.5" DISK DRIVES ST	£74.99
ATARI STFM 1 MEG INTERNAL DRIVE UPGRADE	£74.99

SPECIAL OFFER on Amiga 1 Meg upgrades £49.00 without clock,
£59.00 with clock

STAR LC 10 COLOUR PRINTER.....£215.00

STAR LC10 MONO PRINTER.....£169.99

STAR LC10 COLOUR HEAT TRANSFER RIBBONS - IDEAL

FOR PRINTING YOUR OWN T-SHIRTS ETC.....£17.99

BLANK DISKS AT
AMAZING LOW PRICES

10 3.5" DS/DD life time guaranteed£7.50

10 5.25" DS (per 10).....£3.50

Bulk buyers please phone for bulk prices

SEGA MEGA DRIVES NOW IN STOCK!

WE STOCK MANY ITEMS NOT LISTED HERE PLEASE PHONE
FOR ANY ITEMS NOT LISTED

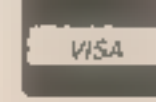
All prices include VAT and P & P

PLEASE NOTE ATARI 8-BIT OWNERS WE SUPPORT YOU
PLEASE PHONE FOR DETAILS



MERLIN COMPUTERS

62 Chester Road East, Shotton,
Deeside, Clwyd CH5 1QB
Tel: 0244 822597



★ POCKET SIZED ★ PC-COMPATIBLE ★ PERSONAL ORGANISER ★



ATARI Portfolio

THE PC IN YOUR POCKET

The new Portfolio from Atari is the world's first pocket-sized electronic organiser that is also a powerful PC compatible computer, with a full QWERTY keyboard and scrolling 80x25 character display.

Portfolio includes everything you would expect from an electronic organiser - an address and telephone book, time manager, diary and sophisticated calculator.

Portfolio also includes several functions that you would not expect - a spreadsheet for your personal budget and expense records, as well as a text processor for typing memos and letters.

And, because Atari's Portfolio is PC compatible, it can communicate with your desktop PC at home, or in the office. You can transfer files from one to the other, to enable you to update your reports and figures with the Portfolio while you are on the move.

FOR ONLY **£249** INC VAT

SPECIFICATION

- **Processor:** Intel 80C88 @ 4.9152Mhz.
- **Operating System:** Compatible with MS-DOS 2.11
- **Internal ROM:** 256K containing BIOS, operating system and applications suite.
- **RAM:** 128K with an internal RAM disk, configurable from 8K. Externally expandable to 640K RAM.
- **Keyboard:** 63 keys, QWERTY, IBM PC BIOS compatible. Buried numeric pad and function keys. Optional key click.
- **Character Set:** Extended IBM ASCII (255 characters).
- **Mass storage:** credit card sized memory cards (32K or 64K or 128K RAM).
- **Display:** Graphics LCD, supertwist technology, MDA compatible, 40 columns x 8 lines, 240 x 64 pixels (with the option to window a full 80 x 25 character display). Keyboard controlled contrast.
- **Peripherals:** 60 pin expansion BUS to take serial and parallel ports and memory expansion units.
- **Size:** 8" x 4" x 1" (200mm x 105mm x 29mm).
- **Weight:** 495 grammes (with batteries).
- **Applications:** calendar and diary, address and phone book, Lotus 1-2-3 compatible spreadsheet, text processor, communications software.

5 BUILT-IN APPLICATIONS! TO GET YOU ORGANISED!

To get you started, Portfolio comes with a suite of five useful functions built-in, all accessible from a simple menu display.

TIME MANAGER

More than just an electronic diary, the Portfolio Time Manager enables you to plan your appointments via a comprehensive calendar and diary. It can even be programmed to sound an audible alarm at specific times to remind you of important appointments.

CALCULATOR

Your Portfolio will be invaluable in the office or at home as a powerful pocket calculator. It has a full range of functions, including factorial,

power and root calculations, all with multi display formats and memories.

ADDRESS BOOK & DIALLER

Portfolio has a complete address book facility that allows you to store hundreds of addresses and phone numbers. And, at the touch of a button, you can retrieve any one of them, search for a specific grouping, such as "all Italian restaurants". And, when you are ready to book your table, hold your Portfolio to your telephone mouthpiece and use its special built-in tone dialler to dial the number for you.

TEXT PROCESSOR

The Portfolio's built-in text processor program

includes word wrap, line and column count, string search, in fact most of the functions you would find in a word processor. It handles printer and word processor control codes and allows easy transfer of files between Portfolio and your desktop PC.

SPREADSHEET

For real calculating power, Portfolio has a Lotus 1-2-3 compatible spreadsheet built-in. It has 127 columns x 225 rows and reads/writes Lotus V1.0 and V2.01 files, so you can transfer data and from Lotus 1-2-3 on your desktop PC. The Portfolio's 256K ROM includes MS-DOS and PC BIOS compatible systems software.

COMING SOON!

In addition to the excellent software built-in to the Portfolio Free of Charge (see right), other software and peripheral products, such as the sophisticated Pocket Finance package and serialcentronics interfaces are available. And it doesn't stop there. Many manufacturers have recognised the potential of the Portfolio and have already started to design new peripherals and software. Products currently under development include: Serial interface with built-in mini modem, Apple Macintosh interface, business, utility and programming software plus a range of adventure and battle strategy games. For further free details on the Portfolio range, fill in the coupon below and return it to Silica Systems now.



MEMORY CARDS

Portfolio can store and retrieve data and programs from its own RAM, or from small credit card size memory cards that slot into its built-in card drive. The cards are available in three sizes, 32K, 64K and 128K, so you can carry a library of data in your pocket. The card drive also accepts ROM cards, which can contain commercial or custom software.



POWER SUPPLY

Portfolio is powered by three AA batteries which will run for up to six weeks with normal use, or from the mains using an adaptor. All the peripherals take their power from the Portfolio, so no extra batteries or adaptors are required. A 'battery-low' warning and memory back-up ensure that information is not lost when the batteries are changed.



INTERFACES & PERIPHERALS

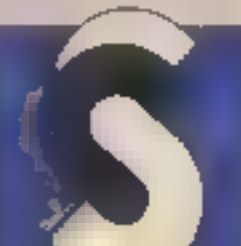
Portfolio can communicate with other computers and supports a growing range of peripherals via a built-in 60 pin bus connector. Peripherals available include serial and parallel interfaces and memory expanders (to 640K). You can also add a card drive to your desktop PC, to enable it to read/write to Portfolio's cards.

SILICA SYSTEMS OFFER YOU

FREE OVERNIGHT COURIER DELIVERY: On all hardware orders shipped in the UK.
TECHNICAL SUPPORT HELPLINE: Team of Atari technical experts at your service.
PRICE MATCH: We normally match competitors on a "Same product - Same price" basis.
ESTABLISHED 12 YEARS: Proven track record in professional computer sales.
£13m TURNOVER (with 60 staff): Solid and reliable with maintained growth.
BUSINESS/EDUCATION/GOVERNMENT: Volume discounts available for large orders.
SHOWROOMS: Demonstration and training facilities at our London & Sidcup branches.
THE FULL STOCK RANGE: All of your Atari PC requirements from one supplier.
FREE CATALOGUES: Will be mailed to you with offers and software/peripheral details.
PAYMENT: By cash, cheque and all major credit cards.
CREDIT PAYMENT TERMS: Silica are licensed credit brokers - details on request.

Before you decide when to buy your new Atari Portfolio, we suggest you think very carefully about WHERE you buy it. Consider what it will be like a few months after buying your Portfolio, when you may require additional peripherals or software, or help and advice with your new purchase. And, will the company you buy from contact you with details of new Portfolio products? At Silica Systems, we ensure that you will have nothing to worry about. Silica Systems is a new division of Silica Shop, the UK's leading Atari specialists. This new division has been established to provide a service to the more serious home user, as well as to business and education purchasers. Silica have been established for over 12 years, and have an annual turnover of £13 million. With our unrivalled experience and expertise, we can now claim to meet our customers requirements with an understanding which is second to none. But don't just take our word for it. Complete and return the coupon now, for our latest Free literature and begin to experience the "Silica Systems Service".

**SILICA
SYSTEMS**



MAIL ORDER: 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX Tel: 081-309 1111
 Order Lines Open: Mon-Sat 9:00am-6:00pm No Late Night Opening Fax No: 081-309 0608

LONDON SHOP: 52 Tottenham Court Road, London, W1P 0BA Tel: 071-580 4000
 Opening Hours: Mon-Sat 9:30am-6:00pm Late Night: Thursday until 8pm Fax No: 071-323 4737

SIDCUP SHOP: 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX Tel: 081-302 8811
 Opening Hours: Mon-Sat 9:00am-5:30pm Late Night: Friday until 7pm Fax No: 081-309 0017

BUSINESS/EDUCATION: 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX Tel: 081-308 0888
 Order Lines Open: Mon-Fri 9:00am-6:00pm Closed on Saturdays Fax No: 081-308 0608

To: Silica Systems Ltd, Dept NCE-0790-29, 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX

PLEASE SEND INFORMATION ON PORTFOLIO

Mr/Ms/Ms: Initials: Surname:
 Address:
 Postcode:
 Tel (Home): Tel (Work):
 Company Name:
 Which computer(s), if any, do you own?

TOUR OF THE CLUBS

Having hated golf and all things golfesque since early childhood, the idea of reviewing a garish trouser and obscene jumper simulation held as much appeal as listening to Tarby and Brucey bantering about Sevvie Bally during a pro-ammy charity bash. Not only that but there was a *Kick Off 2* tournament going on around the corner – real sport, or so I thought.

Sitting in front of the PC with mouse to hand, *PGA Tour Golf* was booted up with an opening screen followed by the credits, then on to the copy protection. This was a good sign to begin with – there was none of that 'Go to page 23, paragraph 12, word 3, avoiding capitals and commas, but including question marks', it was simply a case of consulting the manual for the yardage on a particular hole. Once that's been negotiated you are taken into a pleasant graphic of The Pro Shop. So far, so OK.

ANY OLD IRONS

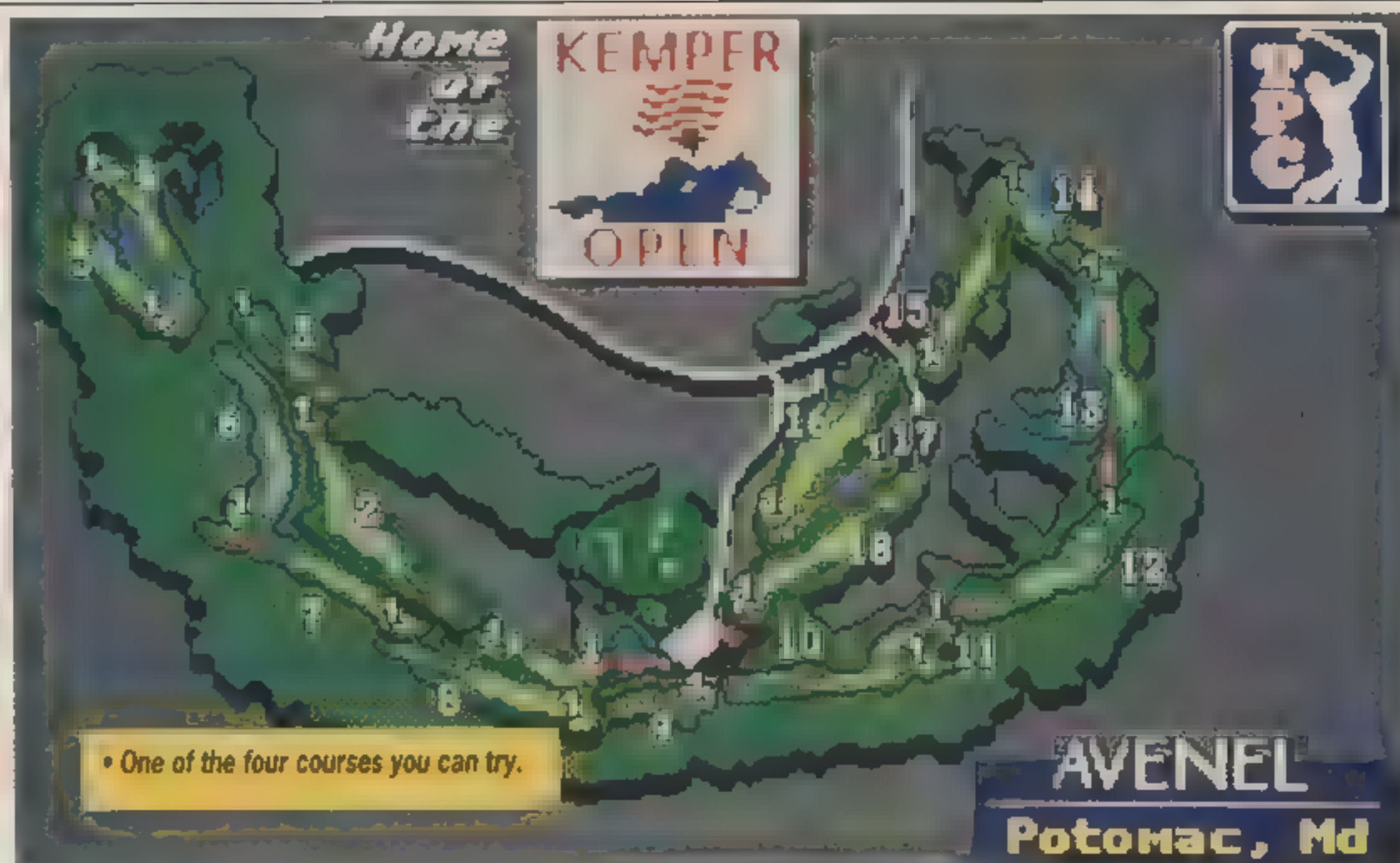
The shop is in fact a front operation for a number of choices. As with everything else in *PGA Tour* you can use the mouse or keyboard, and pull down menus from a bar at the top of the screen. There is a wide range of choices open to you – driving range, putting, practice rounds, tournament play – but unfortunately attire isn't one them. Up to four can play, either human or computer players. The humans can be saved to disk and this is where the going gets extremely good.

Once you have logged yourself in, you begin to build up statistics for every tournament played. These stats become very precious after a while, and you find yourself deliberating over every drive, pacing every putt and howling at every hook, because one bad hole might affect the excellent ratings you've built up.

Even non-golfers will be aware that you can't hope to hole a ball without clubs, so the next choice is which set to take. A new screen appears with a healthy choice of irons, woods and wedges. As this is pro golf your 'caddy' has already made a selection for you, however, you can change this by swapping what you have for what you want, say a 4 wood for a 1 iron. Believe me, each of the four available courses requires a different choice. And now to play.

THE WOODS FOR THE TEES

Forget the driving range and the putting practice, both of which are sweetly rendered, say pah! to the practice rounds and head straight for a tournament.



Golf on a computer, what's the point? That's what Tim Smith thought until he got to grips with *PGA Tour Golf*...

After playing an abysmal 43 over par on the first, lake laden course, things began to look up. Four holes into the next tournament I was hooked... often. The speed and flow of the game are almost as impressive as watching the instant replay (replays are just another added extra) of a colleague making an eagle – 2 under par – on a 464 yard, par 4 hole.

Admittedly the *Express PC* is fairly quick itself (20MHz) but even taking this into consideration, *PGA Tour Golf* would still provide a seamless few years of enjoyment for a plain old Amstrad 1640.

Shot making sticks to the tried and trusted power and snap bar method. Unlike *Leaderboard* for example, the bar is horizontal on the screen. Click on the mouse,



Preparing to drive off on the first tee. Note the wind indicator, which tends to gust around erratically.



Some of your opponents in the tournament.

or press the spacebar, once to start the backswing, again to stop on the required percentage for the distance and again for the snap. Accuracy is imperative, and hitting harder than the computer recommends means you have to be point perfect on the snap. Strangely, hooking and topping with the driver or woods seems to have much less of an effect on direction than doing the same with an iron.

Each round comes with various automatic options: overhead views are provided, as are contour views of the greens and messages telling you about the lie of the ball. To speed up the game these can be toggled off,

although the view of the green is a must as all of them are quite demonic in their dips and curves.

There is also an amazingly well scrolled over-fly of the course with comments from some real pros such as Fuzzy Zoeller. This fly over wasn't quite so impressive on a floppy-based PC1640. It might sound trite, but it was the sheer elegance of this aerial tour which set the seal on a growing love affair with *PGA Tour Golf*.

Everything, from gusting wind to tantalizing putts, is there. Tournament play (eat my dust Hale Irwin) is the heart of the matter. Each tournament offers disgustingly huge amounts of money but you have to make that cut (qualify for the next round) in order to earn it. One part of the game not covered in the manual is the fact that the tension really does build up towards the end.

FORE! WARNED

Having been firmly connected to the mouse for the last week or so, a few errors did crop up. None of them really marred the game and the main glitch actually makes life easier.

You can only save one game at a time, which is a bind when you consider that there are four courses (so far). Playing into water calls for the choice of a re-hit from where you shot or a 'drop' – the drops appear to be erratic. Two players making a similar shot can drop in different places. Best advice, try the re-hit.

Another minor point is the fact that you can land right behind a bush but when you come to make the next shot, the bush will have disappeared.

Finally, and most obviously, there is no out-of-bounds. This means that you can play with full power, place the cursor to the extreme left or right, hook the shot, and still end up in sight of the fairway, albeit in the heavy rough.

Although these niggles should not have been included in the game, unlike many bugs they really do not detract that much from the pleasure and sheer style of play.

OVERALL

This has been one of those reviews which, unhappily, has had to leave a great deal out. The only way you're going to be able to sample the intensity of *PGA Tour Golf* is to go and buy it. With that in mind, does anyone know where they sell yellow, pink and blue tartan jumpers and those great mauve trousers? But right now it's over to you Tarby. ■

UK HOME COMPUTERS

AMSTRAD PPC640S

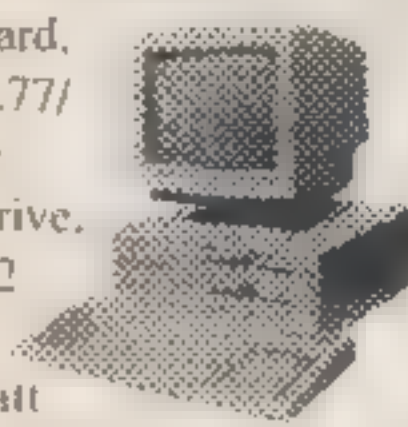
640K RAM, Serial & Parallel Interface, External Disk Drive interface, External CGA Compatible monitor output, Mains, battery & cigar adaptor powered, MS-DOS, PPC Organizer, & MIRROR COMMS Software. True IBM Compatible. Internal 3.5" 720K Disk Drive (Option for second drive). Built-in modem (Hayes compatible). Free carry case and full manuals.



OUR PRICE £399.95p
Fully Inc.

SAMSUNG PC/XT

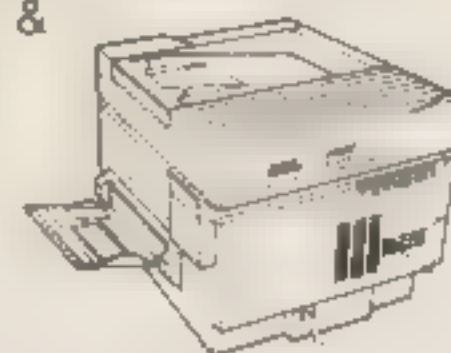
512K RAM, Full-Size keyboard, MS-DOS 3.2, GW-BASIC, 4.77/10MHz Clock Speed, Battery Back-Up, Single 360k disk drive, Hercules display Card, RS232 & Parallel Ports, 8087 Co-Processor socket, 90 Watt switched Power Supply, Small Foot Print, 4 Empty Expansion Slots, 1 Empty Disk Drive Slot. Free Ex-Display Mono Monitor.



Single Drive 20 Mb Hard Disk
£459.95p **£689.95p**
Overnight Carriage £14.00p

CITIZEN LASER OVERTURE 110+

At last! an affordable laser printer. 512k memory, Epson, IBM, & Diablo compatible. 10 pages per min. Parallel & Serial I/F. 300x300 dots per inch. Landscape or portrait printing. 12 Months on-site warranty. Send for further details, or order TODAY!



OUR PRICE £804.95p
Including VAT, Carriage & Warranty

"ABILITY"

Made by MIGENT, the complete integrated package for the PC & all clones. 5.25" disks, the package offers a wordprocessor, database, spreadsheet, graphics package & communications software. And of course, all programs are integrated. Supports LOTUS 1-2-3 & hercules graphics cards. This package originally retailed at over £100.00p, and still offered at £60-£65 everywhere. Now check out our price.

OUR PRICE £29.95p
inc. VAT & Postage

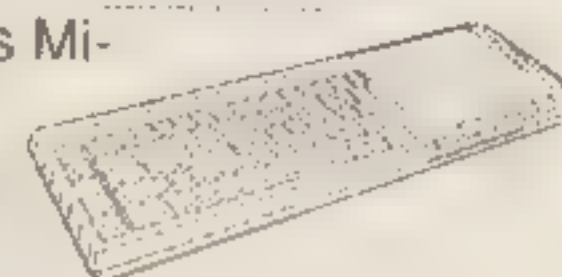
PC NETWORKS

Manufactured by AST, we have on offer ASTORUS NETWORK PACKS & SOFTWARE, and ASTORUS NODE COMPLETE NETWORK SOLUTION. Send now for details of our limited network stocks & full details. We also have a small quantity of TAPESTRY Software.

OUR PRICE £149.95p
Postage & Packing £5.05p.
Send now for full details of this and all of our networking offers.

SINCLAIR Q.L.

Fast 68008 CPU 128K RAM. Twin fast-access Microdrives. Complete with all manuals, cables, PSU, and software (Wordprocessor, Database, Spreadsheet, & Graphics.)

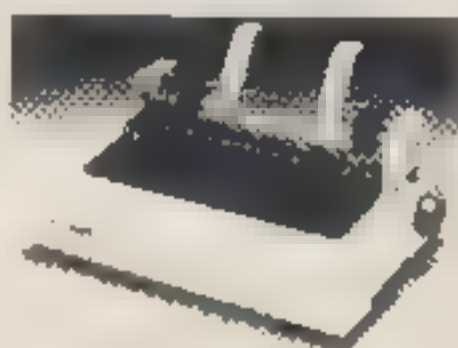


JM ROM £99.95p
JS ROM £119.95p
Postage & Packing £4.05p.

DISCOUNT PRINTERS

CITIZEN LSP 100

150 cps, 30 NLQ, Friction & Tractor, EPSON & IBM Compatible, Front Panel, Control, Parallel Interface, Small foot print, 80 columns, 9 Pin Dot Matrix.



recommended price £249.95p
OUR PRICE £119.95p

Postage & Packing £5.05p

PC AT/XT KEYBOARDS

Top-Quality 101 key-keyboards made by ZENITH DATA SYSTEMS. Standard AT layout, and switchable between PC/XT & PC/AT. Don't put up with your inferior keyboard any longer, at our price you can afford to upgrade NOW! Standard 5-Pin DIN Connection makes this keyboard compatible with almost all IBM's and clones. Stocks are very limited so send today!

OUR PRICE £39.95p inc. Post

DAISYWHEELS

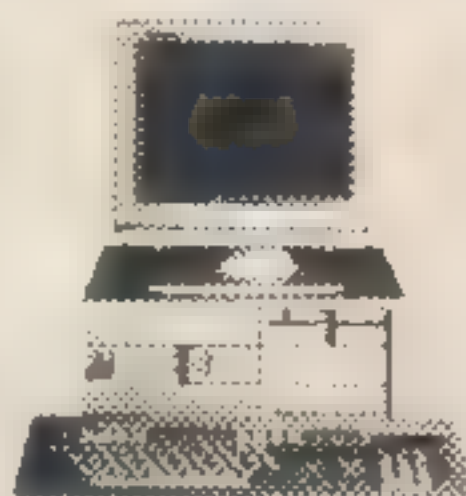
Brother Daisywheel Printers at half price. The HR20 (Usually £450.00p) & the Brother HR40 with a single sheet feeder (Usually £800.00p) at our incredibly low prices. Send today for the full specification details and compare our prices below. These printers are top-of-the-range workhorses and represent tremendous value.

HR20 £275.00p
HR40 £349.95p

Inc. VAT & Postage (Overnight carrier add £5.00p)

SAMSUNG 6000/1 PC/AT

A top-branded PC/AT at an XT price. 80286 Processor with a 6/10 MHz speed. 1Mb RAM, 6 expansion slots, 1.2 Mb 5.25" floppy, 102 key keyboard, battery back-up, Hercules/Monochrome Video Card, RS232 & Parallel Ports, MS-DOS 3.2 & GW-Basic.



£649.95p
inc. VAT & Carriage

SEND FOR DETAILS

Our all-in price of £649.95p includes the Brand New Samsung, an Ex-Display Mono Monitor, & O/N Delivery.

BARGAIN BASEMENT-TO CLEAR

STAR NB-15 FONT ROMS	£19.95
GW-BASIC (MICROSOFT)	£14.95
PC MEMORY BOARDS (unpopulated)	£9.95
PS2 512K MEMORY CARDS	£49.95
TAPESTREAMER CARTR. DC300XLP	£10.00
COMMODORE C64 MUSIC SYSTEM	£29.95
NEC 3.5" 720K UNCASSED DRIVES	£49.95
ZENITH EAZY-PC MEMORY MODULE	£33.00
EPSON LCD SCREENS (for laptops)	£49.95
64K SERIAL/PARALLEL BUFFER	£49.95

We have numerous PC items to clear. Send now for our full list. Phone for availability and postage charges for the above items.



VISA/ACCESS orders welcome. Prices subject to change without notice. All transactions are subject to our standard conditions of Sale, available upon request. Personal callers welcome by appointment. All prices include VAT. All goods Brand New unless expressly stated otherwise

VISA

UK HOME COMPUTERS

82 CHURCHWARD AVENUE,
SWINDON, WILTS, SN2 1NH.
0793 695034

TECH TIPS

Does your PC keep packing up? Is your Amiga less than friendly? Would your ST try the patience of a saint? Send your sorry stories to Kelvin Pommer and he'll soon see you right. Drop him a line at Beauford Court, 30 Monmouth Street, Bath BA1 2AP. Sorry, but we can only reply in print.

Help! On-line question

I have recently obtained an LSD 3142 Multimodem made by Lion Systems Developments Ltd. It came without any manual or setting-up information, and as I am new to comms I haven't any idea how to set it up or what baud rate it uses. It has four push buttons on the front panel which are TEST, LOOP, MAN and AL/DL, and also LEDs which are TX, RX, RTS, DCD, LINE and OFF LINE. It also has a bank of eight dip switches inside.

Please could you offer me some advice on how to go about trying this modem or setting it up for use on my PC. I have connected the modem to the RS232C port with a suitable lead and have also obtained a comms software package called Eazilink. Perhaps someone reading this letter may be able to let me have a copy of the manual or information on this modem. They could contact me on 0705 372815.

Richard Colman, Portsmouth, Hants.

I'm afraid that the modem you've been given is an unknown quantity to us here at *Express*. From your description of it, it could be a 'special', designed to run with a particular hardware/software set up. If this is the case, it would require the furrowed brow of a dedicated comms wire-head to configure it as a simple on/off line device. If it isn't a special, you could try out the following to get it to respond to you.

You haven't said what sort of PC

you have, but you could start by making sure that your software is configured to drive the correct serial port (COM1 or COM2).

Once you're sure that you've set the software correctly, try typing AT and hitting the carriage return. If the screen echoes back 'OK', then your modem supports the Hayes protocol. This is well documented and, being the industry standard for data transmission by modem, means that the manual for any Hayes-compatible modem will give you enough information to get on line.

If all this fails, I'm sure some kindly Techtipper will provide the necessary information.

Help! DIY modem

I have, for a considerable time, wanted to buy a modem. However, is it possible to make your own modem? I have noticed a modem 'chip' in the Maplin catalogue. My brother is quite good at electronics, so would it be better to buy a modem or make my own? If your recommendation is the latter, how would I go about making the modem?

Any help you can offer would be gratefully appreciated.

Nicholas Holland, Maidenhead, Berks.

It is possible to make a modem, just as it is possible to make anything given the right plans and tools. I don't know of a modem 'kit' but I do know of one chap who has designed and built a modem.

The first (and most important) warning is that any modem that you build yourself will have to remain on the shelf. Telecom's rules say that you can't plug anything into a phone line unless it has BABT approval. This takes months, costs thousands and would be a little OTT for a one-off.

Assuming that you decide to go ahead anyway, a 'guru' of things modem is Dave Gorski, the sysop of Aspects bulletin board in Manchester.

Dave was responsible for the *Cage* viewdata package for the CPC, and has had one of his modem designs sought commercially. The bad news is that to get in touch with Dave you'll need a pal with a modem so that you can log on to Aspects. The number is 061-792 0260, the board runs at V21, V22, V23 and V22bis with the protocol 8n1. Let us know how you get on.

Help! Hard facts

Six months ago I was lucky enough to get one of the Olivetti PC1s that Evesham Micros was selling for £300, and I have nothing bad to say about it. I know it's not a 16Mb 486 with a 120Mb hard drive and a zillion megahertz top speed, but I've got all of that technical stuff to work anyway. Let's lay it on the line - I like my PC1.

The only thing that's bugging me is that this is a hard-drive type PC1 (the PC1HD) knocked out with a second floppy instead when the supplies of hard drives ran out. A little message comes up when-

ever it boots saying "Hard drive not ready" and there's a sad little empty 40-way connector on the board just waiting for a visit from Mr Winchester, if I could only figure out a way.

What I think is the Western Digital disk controller chip is marked: (c) WDC '87 WD37C 65 BJM 00-02 8823 030819103.

The B: floppy is connected to a 34-way connector and there's another one (with a two-way switch to select between these) for connecting an external 5.25-inch drive D:. Plus that empty 40-way, just begging for it.

Now the easy way of adding a hard disk is to stick one into an expensive box and nail it onto the expansion port, where it won't auto-boot anyway, but true to the traditions of generations of inventive and knowledgeable Tech Tips, you are about to tell me of a little-known 3.25-inch half-height 65Mb drive which has very low power consumption, mates with a 40-way connector and costs under £100... aren't you? Please?

There's, oh, must be tens of other PC1HD owners out there just dying to get some hard storage going. And while you're ringing up your mate Clever Trevor or whoever you get all your answers from, see if he knows how to add a battery backed clock to save me all that date-and-timing. Ta. I've really, truly and honestly bought *Express* since Issue 1, November 12, 1988 (grovel, grovel) and this is the first time I've had to bother you with my boring problems.

By the way, in case the other PC1 owner hasn't written and told you, you were right (as always) to tell Mr Dixon in *Express* 80 that it was his AUTOEXEC.BAT file moving the screen. Olivetti seem to prefer the screen offset one character to the right so they put in an Inscrutable little file called PERITEL.COM which has this effect. As I don't know, and Olivetti don't say, exactly what this does I've left it in my AUTOEXEC and moved my chair a bit.

Bernard Coxhead, Northampton.

Clever Trevor says that the last time someone wrote asking for hard drives for a PC1, the PC1 user group sprang out of the bushes and offered to supply these wondrous Winchesters for all who had the necessary disposable income to

HELP! Do as I say, not as I do.

Why do you spend week after week answering technical questions about disk drives, operating systems and hardware no-one's ever heard of when the majority of your readers just want simple advice on how to get the best from their computer?

I have been at computers for years and haven't ever needed to do anything more drastic than read a manual or fit a plug. If your readers

spent more time reading the manual and less time writing letters about so-called problems that are well documented in their literature there would be more space available for real tips and help.

You can, however, assist me with the following. How do I load PCW LocoScript files into PCW Protext? Can I produce PostScript files on a PCW using the splendid

desktop publishing program from Database? Glenn Adams, Southport, Merseyside

I'm glad to see that the majority finally grew a voice. The reason that we answer the questions that we do is that those are the questions we get the most of. Strange as it may seem, these are the questions that people want the answers to.

To answer your questions: 1. Load into the Protext files conversion program as a WordStar file. It may sound unlikely but it works!

2. No, the program that you mention gives no support to PostScript. There aren't currently any programs on the market that will do the conversion that you want.

purchase them. You can find them at 26 Kings Drive, Westonzoiland, Bridgewater, Somerset TA7 0GH. Or you can phone Norman Keylock, who runs the group, on 0278 691045.

■HELP! As simple as ...

I know that it's possible to get my Amiga to delete every file in a current directory with the command `DELETE #? ALL`. My problem is that I need to write a routine using AmigaDOS commands that will allow me to throw out different categories of files, selected alphabetically, before replacing them.

For example, I might want to delete the files beginning with A, C, and Q or F, H and W. Is there a simple way to do this?

Andy Gitton, Sturgesley

I shudder to think what your program actually does but what you want ■ do can be achieved quite simply. The `DELETE` command in AmigaDOS can be extended to do the job that you require. To use your own pair of examples, the solution would be:

```
DELETE (A/C/Q) #? and DELETE
(F/H/W) #?
```

A good source of AmigaDOS reference (although my issue ■ probably a little out of date by now) is *Amiga DOS Reference Guide* from Compute!, ISBN 0-87 455-047-5.

It's an American book with ■ cover price of \$16.95, but the price over here can vary a lot, so shop around.

■HELP! Monitorium

I want a robust monitor for my Archimedes A3000. The one that Acorn is offering looks plastic, cheap and liable to damage. Is it the same one that Philips makes? It looks like it.

At school, we used to have charcoal grey, cube shaped monitors that were specially made for the BBC B and, as well as standing the knocks, they were high quality. Will one of these work with my Archie?

Paul Hayes, Aylesbury, Bucks.

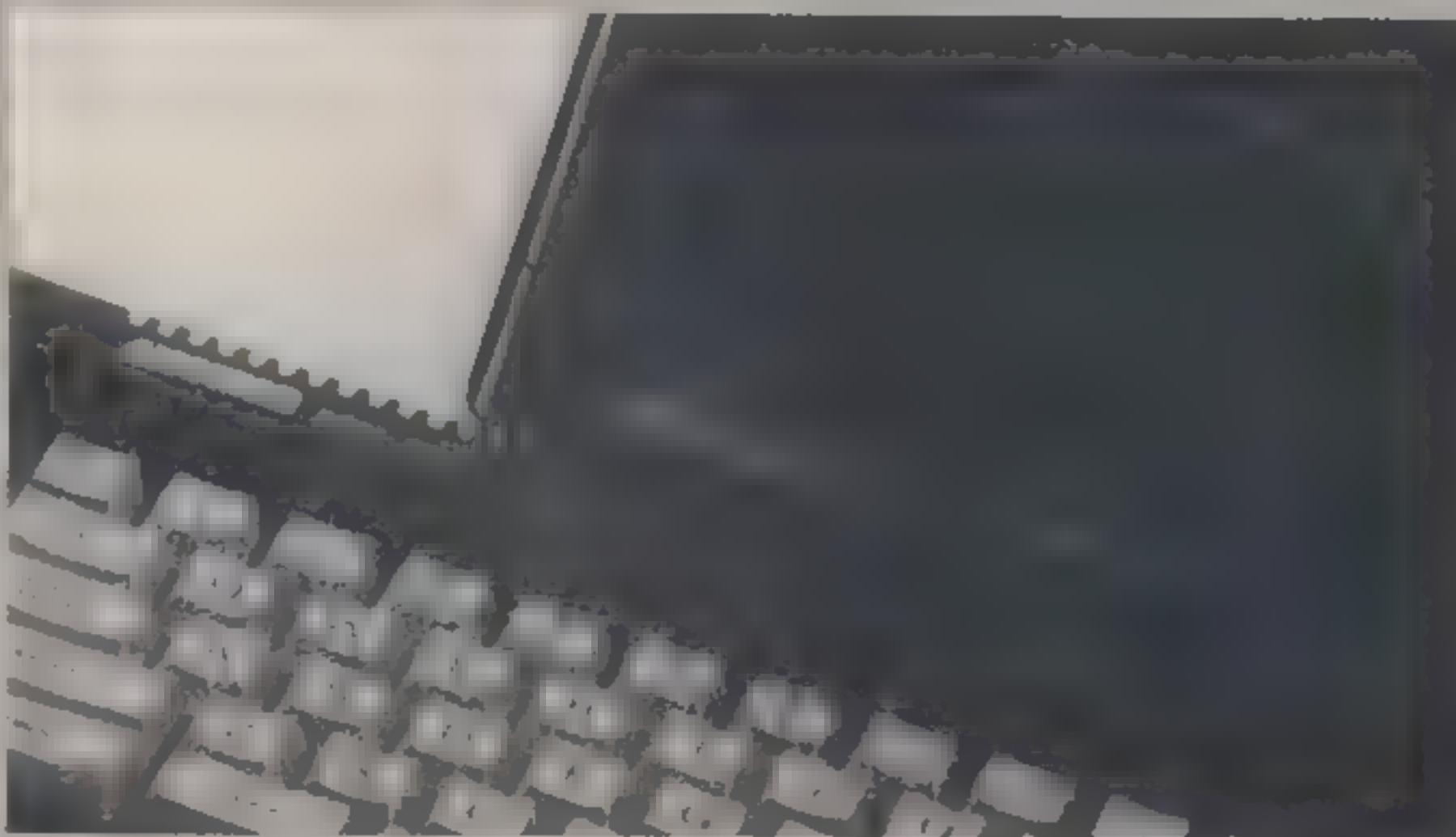
The monitor that Acorn supplies is the Philips monitor badged with the Acorn name. A quick trip around the *Express* building found half a dozen of these doing sterling service on the various magazines. They seem to have survived the rigours of the publishing world without damage.

The monitor that you remember sounds like the Microvitec Cub. A phone call to Microvitec in Bradford confirmed that the Cub was alive and well.

It has metamorphosed from its charcoal grey to an A3000 shade of cream and is available as the Cub 3000 with an A3000 video lead attached. It retails at £220 and has the tastiest medium-resolution display I've seen this year.

You can contact Microvitec by phone on 0274 390011.

■HELP! Problems with games after screwdrivering a CPC



• CPC games won't run after Multiface surgery – or will they?

I have several queries so perhaps you could redirect them as appropriate.

1. Several aeons ago I had the pleasure of seeing that I had been a winner of a CD disk for my Amstrad CPC. I still await the pleasure of actually receiving said CD. I have written before but that was in the pre-printer age, and perhaps you could not read the writing.

2. Since my CPC was upgraded by internal surgery to thinking it was a 6128, and had a memory graft of 64K to prove it, I cannot get some of the games to load that previously loaded well. These are, in the main, tape games that were disked for convenience using my Multiface 2 (they are not pirated). I am having to reload them again from tape and then redisk them with the Multiface 2, which is all very well, but why has it happened, and is there any other way round the problem?

3. At work we have a computer terminal to access and input to the main computer which is about 200 miles away. We have been provided with an incredibly expensive looking printer (either Hitachi or Hyundai, my memory fails me) but no connector cable. I had a cable that had been used to connect a DMP 3160 to a Sinclair 200 or similar, and the sockets fitted, but we don't know how to print out screen information – none of us understand the printer manual and nobody higher up seems to have the answer either. Should it be possible, in which case is it just the cable that is wrong and can we get a cable, or is it not possible to print out from terminals, in which case somebody up there has sent us an expensive lemon?

4. Going back to my CPC, I should like to get the introductory disks normally provided with one of these, as

the handbook is tantalising when I only have a CPC DD1 disk with CP/M 2.2 and DR-Logo. Is the fact that you did not print my ad for this in the 'wanted' column due to a) it is illegal to sell or pass on these disks to anybody even if they are not wanted by the present owner, or b) you did not get my letter?

That is enough problems for now – I do hope you can help with all/some of them.

Clare Jenkins, Newton, Powys.

1. We waited and waited and waited and the CD games never came. As we never received it, we couldn't send it. To make up for it, some software should be winging its way to you in the near future.

2. The way that the Multiface utilises the RAM and operating systems of the 464, 664 and 6128 is different and as a consequence, any

Multifaced game or program will only run on the same configuration of machine. Some time ago we tried to Multiface games on the office 464 for use on the 6128 with similar results. I'm afraid the only answer is to keep on pushing the Multiface button.

3. The first thing to find out is whether the terminal can support a printer, and what connections it uses to do this. The system manager of the 200-mile-away computer should be able to give you the information you need. Once you've discovered those details and found out which socket on the terminal is the printer interface, you can find out whether it is compatible with your whizzy new printer by checking with the manufacturer. Once this is done, you should have some idea of what sort of lead you need and a local computer shop should be able to supply or make it.

4. We get at least a zillion letters a week with reader ads in them and the lack of space dictates that sometimes you win, sometimes you don't. That time you didn't. The CP/M disks that you get with your CPC are licenced purely for use with that machine. If you sell the machine, you should pass on the CP/M disks with it. However, you shouldn't give them away or you're bound to be in breach of the Digital Research licence which states the conditions of use for CP/M.

■HELP! Spec vs video

In order to keep things tidy, we had all our TV, video and computer cables professionally 'hidden' and routed. Everything worked fine until our son tried to use his Spectrum Plus 2 while the video was on.

The video and the computer interfered with each other. We contacted the firm that did the wiring for us, but they said that it wasn't their fault. The two pieces ■ equipment must be on the same frequency.

Is there a simple way to change the frequency of the Spectrum? We can't dismantle the video as Radio Rentals would have apoplexy.

Tina Hamble, Gillingham

The output frequency of the Spectrum

cannot be changed simply, but the video can. Computers and videos always seem to congregate around channel 39 on the UHF band, and for that reason most videos have some sort of fine adjustment ■ tune their modulating frequency away from anything that might interfere with them.

If your video is a rented one, a phone call to Radio Rentals should bring a smiling engineer to your door to carry out the two minute job.

■HELP! PC Protex

I used ■ use Protex on a PCW at work for letters and the occasional mail shot.

We were taken over by a larger company that brought with it PCs and WordStar. I lost the battle to keep my PCW,

but was allowed ■ get a copy of PC Protex.

My problem is getting Protex to print properly. On the command bar it says 'PRINTER Simple' and while it's possible to get text output ■ paper, it isn't ■ anything better than ■ rough draft quality. The printer ■ an 80-column Epson and the PC is an IBM PC-AT.

M Frobisher, Virginia Water, Surrey.

What you need to do is configure Protex so that it knows which printer you're using.

Before using Protex, run the CONFIG program. This gives you menu options to set up printers, display colours, and text formatting options. In the printer configuration menu there is an option to install your Epson printer. ■

Disks Disks Disks Disks

LOCKABLE STORAGE BOXES

3 1/2"	40 Capacity	£4.50
3 1/2"	80 Capacity	£5.50
3 1/2"	100 Capacity	£6.25
5 1/4"	70 Capacity	£5.50
5 1/4"	100 Capacity	£5.75

LIBRARY CASES

3 1/2"	10 Capacity	£1.05
5 1/4"	10 Capacity	£1.05

MOUSE MATS
£2.00

MOUSE POCKET
£2.40

ALL OUR DISKS ARE 100% CERTIFIED AND ERROR FREE

3 1/2" SPECIAL OFFER 40p

DS/DD 1 meg

Valid only with the coupon below. Only while stocks last.

3 1/2"

Quantity	10	25	100
DS/HD 2mb	£1.18	£1.15	£1.12
DS/HD Preformatted	£1.28	£1.25	£1.22

5 1/4"

Quantity	10	25	100
DS/HD 1.6Mb	£0.45	£0.44	£0.42
DS/DD	£0.26	£0.25	£0.21

ALL PRICES INCLUDE VAT.
3.5 disks come complete with labels
5.25 disks come complete with labels,
write protect tabs and envelopes.

PRICES SUBJECT TO CHANGE WITHOUT NOTICE
NO QUIBBLE REPLACEMENT
OR MONEY BACK GUARANTEE



To: **Media VALUE** ☎ (0784) 466744
Northumberland House, Fax (0784) 450845
Dept NCE, Drake Ave, CREDIT CARD
Staines, HOTLINE (24 hours)
MIDDLESEX TW18 2AP (0784) 451011



I enclose a cheque/PO for

Please charge my Credit Card No.

Expiry Date Signature

Quantity	Description	Price	Total
POSTAGE & PACKING £2.50.		Postage	
NEXT DAY DELIVERY £10.00		TOTAL	

Name

Address

Postcode Tel

E & OE



Get this brilliant new **New Computer Express** magazine binder worth £5.95 absolutely **FREE** when you subscribe for 54 issues at only £34.95

- **Don't miss out** on Britain's biggest selling computer weekly, packed with the latest news and reviews on the Amiga, ST, PC, Archimedes and CPC – plus specialist columns on other machine types.
- **Don't forget** our unique guarantee – if at any time you are not completely satisfied with your subscription we will refund the cost of all the unmailed issues.
- **Don't waste time** – this offer is for a limited period so fill in the coupon below or ring our credit hotline number on 0458 74011

For a six month subscription (26 issues) the cost is £17.95, but does not include the *New Computer Express* binder.

Yes, I would like to subscribe to **New Computer Express**. Please send my free magazine binder when I subscribe for 54 issues at £34.95.

Name

Address

Postcode Tel

I wish to pay by ☐ Access ☐ Visa ☐ Cheque ☐ P.O.

Card Number Expiry Date

Please make cheques/p.o. payable to Future Publishing
Send to: **NEW COMPUTER EXPRESS**,
FREEPOST,
SOMERTON, TA11 7BR



• Get into desktop video the G2 VideoCenter, a good low-cost Amiga-based TV production unit.

The Amiga and ST may share very similar specifications, but in the area of desktop video they're leagues apart. Commodore's decision to include an external sync pulse in the Amiga's CPU right from the word go gave it a major advantage over its rival in the desktop video stakes. That one little addition made it possible for third party developers to launch genlock devices and open up the way for low-cost and reliable video effects, editing, titling and animation.

The ST still lags behind for the want of external sync capability, with only one genlock and no software to utilise it. The Amiga now has eight genlocks ranging in price from £100 to over £1,000, the latest addition being the state-of-the-art £800 G2 VideoCenter.

In brief, the VideoCenter mixes an incoming PAL video signal with the Amiga's output using sliding faders or software control. It can also provide RGB output and has inputs and outputs to drive S-VHS systems.

Fitting the genlock is simple – it's a mains-powered, stand-alone box which plugs into your Amiga's RGB monitor socket; an RGB output on the VideoCenter carries the signal to your monitor. By connecting a videotape recorder or camera via the supplied composite video lead to the genlock you can then choose which signal to view on your monitor. There are four options. Video source signal only, Amiga signal only, video source superimposed over Amiga signal and vice versa. The latter two are known as 'keys' and the effects produced referred to as foreground or background masking.

Superimposition, be it foreground or background, relies on a 'key' colour. In television production, blue has traditionally been used as the key, but, by and

DESKTOP DIRECTING

The Amiga has the power to produce stunning graphics for video – so-called desktop video – but you need some extra hardware. Andy Storer looks at a device which lets you mix video signals with Amiga graphics and record the result to tape.

large, most Amiga genlocks default to black – with a few offering the choice of any colour as a key. G2's VideoCenter offers you 16 selectable key colours from the Amiga's output. What happens is that all appearances on screen of the chosen colour have the incoming video signal superimposed on them. To all intents and purposes the signals are mixed and can be output to videotape as a single signal. One thing worth bearing in mind though is that just because you have a mixed screen display, you can't save it to disk – the signal only appears mixed. It remains two distinct signals that are overlayed one on top the other. You can direct screen output to a video recorder for later viewing.

Besides software controls, VideoCenter also offers front panel control of keying and fade to black so that 'live' mixing and effects can be achieved without the cursor appearing on screen.

While the unit's coded composite video output will be suitable for most professional and industrial applications, the RGB outputs can be used to drive external PAL hardware for full broadcast specification performance with the addition of G2's add-on 815 coder box for £950. No, the kit doesn't come cheap but as broadcast spec caption generators run into five figures, you're still talking major savings.

G2's VideoCenter does exactly what is required – rock steady superimpositions and perfectly graduated

fades and cross-wipes. Use it in combination with a package like Electronic Arts' *Deluxe Video III* or ZVP's *Video Studio* and you have a simple solution to preserving extended animations and titling on tape. This is precisely why a genlock is a good investment if you have a video recorder.

You can think of the tape deck as a device to which you can 'print' animations, logos, advertising sequences – even taping that impossible dash through the final level of *Xenon II* to impress your friends. But at £800, VideoCenter is going to be purchased for professional applications, and G2 is in a position to offer a range of additional kit, priced up to £25,000, to complement the system's serious potential. ■

VideoCenter costs £800 from G2 on 0252 737151.

THE AMIGA VIDEO VAULTS

A genlock is one thing, finding the best software to make the most of it quite another. Here's the Express guide to the tops in Amiga TV titles:

GENERAL VIDEO SOFTWARE
Deluxe Video III, Electronic Arts, 0753 49442, £99.99

The best all-round package for combining computer and video images via a genlock.

DVIII offers super smooth animation, borderless overscan, dozens of transitions, frame accurate recording down to a 1/60th second, and an object-orientated

interface enabling you to author interactive presentations.

VIDEO TITLING AND EFFECTS SOFTWARE
Video Studio, Maze Technology, 081-520 9753, £99

Incorporating 12 of the most commonly used video production utilities, this excellent package also includes 20 broadcast quality anti-aliased fonts along with nine wipe patterns and a range of broadcast test signals. Fades up and down and copyright screens that you can customise yourself are also included.

ANIMATION SOFTWARE
Deluxe Paint III, Electronic Arts, 0753 49442, £80

This excellent package produces high-resolution keying areas for genlocked superimposition and can be used for producing background pictures and retouching digitised images.

Real Things, RGB Studios, 0825 812666, £25
An add-on for *Deluxe Paint III* which allows you to construct detailed choreographies of animated sequences with ease.

DESKTOP VIDEO APPLICATIONS

Captions, interactive video, information systems, video graphics, advertising, training, education, security systems – the list of desktop video applications is seemingly endless. But how do you go about learning the basics?

G2 Systems has produced a video using the VideoCentre which introduces would-be desktop directors to recording computer graphics onto videotape. Costing £10, the tape covers coding, genlocking and keying.

HOW A GENLOCK WORKS

An external sync pulse is essential for mixing computer and video frames since it enables the controlling hardware, the genlock, to synchronise the output from the Amiga's video chip with that of a live or recorded video source. It works by synchronising the line and frame generators of each display's refresh rate thereby locking together both horizontal and vertical scans. The three RGB signals from the Amiga are combined to produce a composite or PAL video signal and mixed with the composite signal from the video source to produce rock solid superimpositions.

Serious business computers have shrunk in size from the huge air conditioned monsters of the Fifties and Sixties to the more manageable desktop variety we use today. With the trend toward more power in less space it was only time before the office became truly portable.

In the early 1980s, the Osborne 'portable' computer brought us the word luggable with its heavy metal chassis and 28 pound weight.

The Osborne was ■ heavy and cumbersome beast that looked like an old sewing machine when closed. It still needed mains power and the tiny internal monitor was all but unusable, but it got the computer off the desk and on the road. Later Osborne executive models came with either CP/M or MS-DOS thus making it the first (slightly) PC compatible portable too.

MUSCLE MEN

More companies produced similar, 20 plus pound, monsters and the executive on the move grew strong arm muscles. As time moved on, technology progressed enough for battery power and liquid crystal displays (LCDs) ■ make true portable computing a possibility. The fold flat display and the ability to run for a couple of hours away from the mains made the new generation of portables a desirable addition ■ the pocket Fiolfax and cellphone.

The weight of a true portable is now down to about seven pounds (about three bags of sugar) and some of the slim new models aren't much bigger than a sheet of A4 paper. This means that with the battery charging pack, battery and leads you can squeeze one into ■ standard briefcase and still have room for a couple of Ryvitas or ■ microcassette recorder.

Simultaneously with these developments, pocket calculators have been getting steadily cleverer for the last few years. As well as all the scientific and algebraic functions, they have started to grow miniature alphabetic keys and notepad functions. It was only a matter of time before someone took the portability of the pocket calculator and combined it with the usability of the PC.

We looked at five of the currently available 'notebook' computers to see how they compared with the more conventional laptop portables. The notebook computers were the Poqet PC, the Atari Portfolio, the Tandy

A COMPUTER IN THE HAND...

...is worth two in the office. But just how useful are the tiny micros you can fit in your jacket pocket? Keith Pomfret got to grips with five..

102, the Husky Hunter 16 and the Cambridge Computer Z88.

Of these the Hunter, Portfolio and Poqet run MS-DOS (the almost universal operating system of PCs), the Tandy and Z88 have their own built-in applications suites of software. The Tandy machine has a built-in modem to connect it with the outside world, and the Hunter has a disk drive that can be connected to load or save programs.

CAMBRIDGE Z88

To persuade the Z88 to wake up, it's necessary ■ push both shift keys together as there's no on/off switch. Fine in theory, but as the Z88 weighs ■ at less than a Tolstoy novel, trying to do this on a crowded train proved too much and the lap top became a shoe top. Once it had been fired into life though, there was plenty to see.

The Z88 has an ingenious suite of programs available on power up. There is ■ filer, terminal, diary, calendar, clock, BBC BASIC and an application called *Pipedream*.

Pipedream has the ability ■ word process and

operate a spreadsheet from the same page. A freestyle approach to what goes in each cell and embedded codes for different type styles and format commands turns ■ very basic spreadsheet into a perfectly usable word processor.

Storage on the Z88 is via cartridges which plug into the front of the unit. RAM, ROM and EPROM cartridges enable the Z88 to store and load programs and data. The third cartridge port can be utilised as an EPROM programmer as well.

A serial port connects the Z88 to the outside world and with built-in terminal software and machine specific 'link' programs, it's quite easy to get your work across to the desktop machine. The serial port can be used ■ drive a serial printer or a modem as well.

RUBBER

The keyboard betrays the parentage of the Z88. It seems that every computer from the Sinclair stable is doomed to a strange keyboard, and the Z88 is no exception. The keys follow the Spectrum's rubber fetish trend, and although there ■ a space bar and the A4 sized machine has finger sized keys, it's still like typing on a latex Scrabble board.

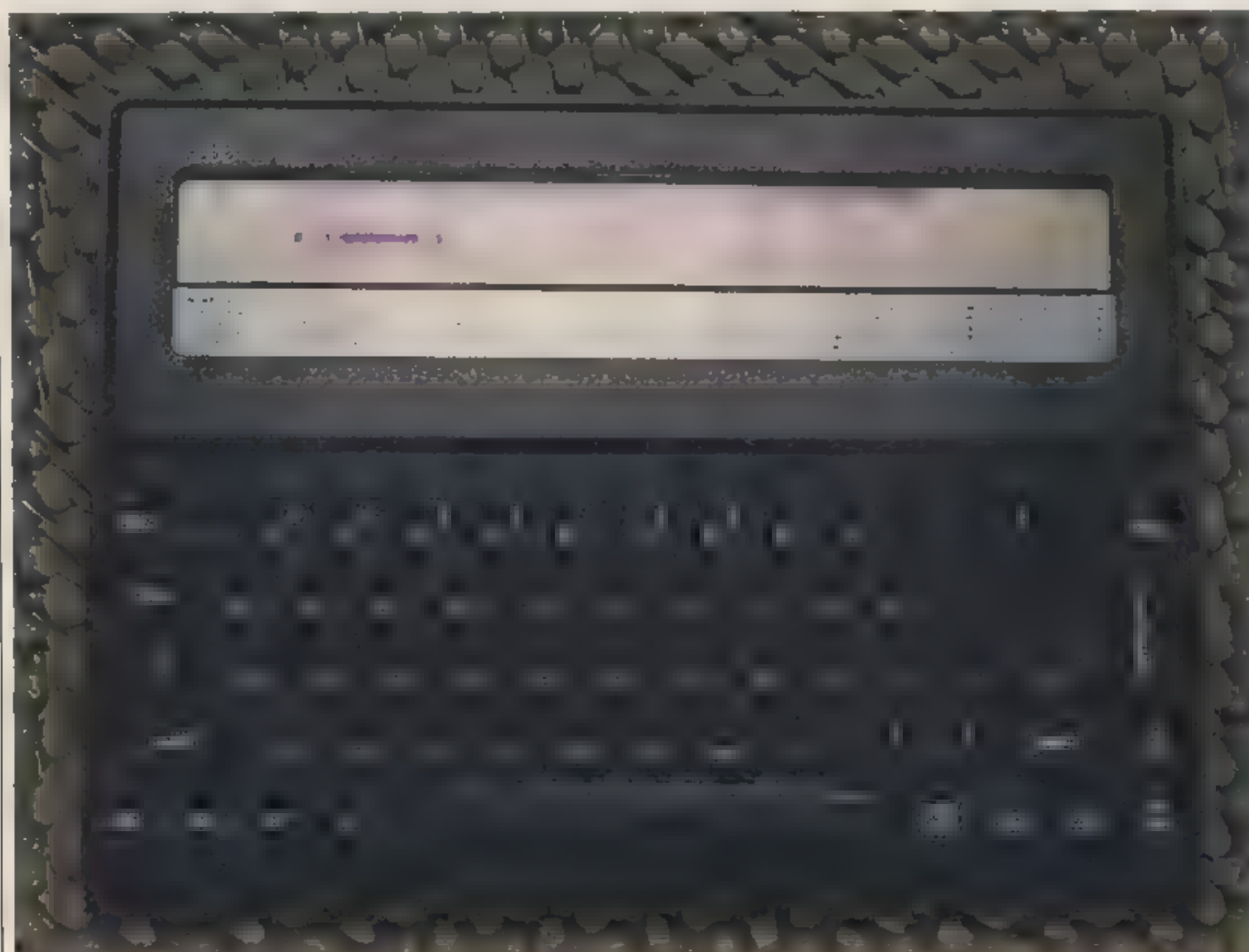
After 2,000 words, the keyboard was bearable, and I'm sure that people have learned to love it, but the awkward positioning of the command keys caused tears ■ time or two.

Niggles apart, it was a usable machine and it was set to get a glowing report until it came to re-load the saved (and backed up) article that you are now reading. This was the third time I re-loaded work into the Z88 and the other times had gone without a hitch. But this time the work was nowhere to be found. A panic phone call to a colleague who uses one brought the reply: "Mine does that occasionally too so I upload my work on to the PC as soon as it's done." So much for true portability. The article was gone for good and this is the second version.

A trip back to the by now much despised Z88 found it on best behaviour and unwilling to lose any more work. It seems to work well enough, and if it weren't for my loss, I'd be happy with it.

Even working through the six-line unit letter box of ■ screen wasn't a problem. The Z88 comes with 32K of RAM as standard and RAM packs can be added (either 32K or 128K of work is stored in the RAM 'disks'). You do need to be nimble at battery changing time as the volatile RAM only allows minutes for the swap.

The documentation is good and ■ pitched in a way as to be useful to both the beginner or computer literate



• Cambridge Computer's Z88: handy if you don't mind the rubber keys.



• The Poquet PC offers true PC compatibility, but at a price.

person. As well as chapters dealing with the machine's functions, there are appendices that cover everything from the technical specifications of the Z88 to error messages and character set.

The price is £230 for the basic model. Versions with extra RAM and links to PCs and Apple Macintoshes are also available.

POQUET PC

The Poquet PC casts itself as the 'serious notebook PC' with a hefty £1,552 price tag for the basic model. It is a true notebook PC, and will fit in an ordinary jacket pocket. The Poquet opens along a hinge in the middle and reveals a keyboard in one half and an LCD backlit screen in the other. The display is adequate and the soft carrying case that it comes in has pouches for storing media.

The keyboard is tiny, and touch typists would probably prefer something a bit bigger, but even without sharpening my short stubby fingers I found it usable. It is laid out in a similar way to a laptop PC and most of the keys are in familiar places.

A long bout of typing on the train proved difficult. Any lateral movement of the carriage soon changed correct spelling to 'cotext spw;linf' and the journey between Bristol and Birmingham produced some words worthy of the PCW *LocoScript* spell checker. On a desk and on my lap the Poquet proved adequate.

Movement problems aside, the Poquet PC behaved as if it was a desktop model. In its standard form, it comes with 640K of ROM including MS-DOS 3.3 and GW-BASIC. 512K of RAM is left uncluttered for program use, which brings us to storage. Credit card sized RAM/ROM cards are loaded into slots under the machine, and perform the function of disk drives. A 64K RAM card is supplied with the machine along with software and connections to transfer files to a desktop PC.

Applications already available for the Poquet are Lotus *Works* and *Smartware*, both integrated packages

which contain database, spreadsheet and word processing. The ACT sales database is available and versions of Lotus 1-2-3 and *WordPerfect* are being developed.

TANDY 102

The Tandy 102 comes with only 24K of user memory (expandable to 32K) but its full sized typewriter-style keys and internal 300 baud modem have long made it a popular text entry machine for travelling journalists. All the applications and programs are contained in ROM

and although it's possible to connect an external disk drive or tape recorder, most people will find it easier to use the communications software to either connect to another machine, or upload the files to an on-line system using the serial port or modem.

The five pieces of built-in software are BASIC, a primitive word processor, communications software, an address book and a scheduler. Of these, the word processor is probably the most useful, allowing the basic entry, formatting and output of text.

The text can be printed from the parallel port, but it is more likely to be transferred to another machine and integrated into another application before final output.

The address book and scheduler packages provide an electronic alternative to the Filofax and the only software of debatable use is the BASIC which is limited to 21k of memory.

The V21 (300 baud) modem doesn't carry BABT approval, so, while it will work on BT lines, Telecom may descend with all the wrath of a Busby spurned if it suspects that you've used it.

The Tandy 102 is not compatible with any other system and can only use its own programs, but the clever integration of a modem and comms software makes this a useful machine for the frequent traveller whose priority is a cheap and efficient way of sending text. It costs £345, but is being replaced so you may have to look around for one.

HUSKY HUNTER 16

The Husky Hunter is a rugged brick of a machine designed to take the rough and tumble of an outside working environment. The keyboard is reminiscent of a large calculator and touch typing would be impossible on it, but it was never intended as a text entry machine.

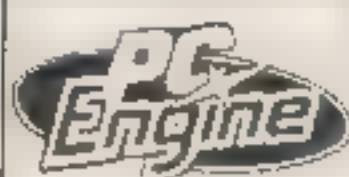
It has a letter box backlit LCD display, and runs MS-DOS from ROM – claiming a large degree of PC compatibility. The small size of the screen makes word processing at best difficult, but it's with data intensive tasks that the Hunter comes into its own.

A separate disk drive (a 3.5 inch, 1.44 Mb model) that can run from mains or battery loads programs into the Hunter's 2Mb memory. Once loaded, the disk drive can be removed and the rugged machine used in all weather conditions. Around the country, electricity and gas boards use Hunters to collect data, and councils with large data gathering tasks are turning to it as an ►

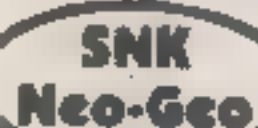


• The Tandy 102 can be hard to find, but its keyboard is excellent.

CYBER-TECH DISTRIBUTIONS



Tel: 0453 544582 **SEGA**



MEGA DRIVE

SEGA Megadrive PAL or Scart	£149.95!
SEGA Megadrive PAL or Scart wa Alex Kid	£165!
NEW PC Engine Core Grafx-Scart only	£156!
OR Core Grafx incl Dragon Spirit + Monster Path	£176!
NEW Super Grafx PAL or Scart + Battleace	£250!
CD-ROM + Interface + game	£320!
NEW FM 10's	£2,500!

Please add £5.00 P&P

★★★ **NEO GEO NOW IN STOCK** ★★★

We also have games for all of the above! Phone now! We're so good.....

ITEMS ARE GUARANTEED FOR 1 YEAR

We also buy secondhand megadrives, PC Engines and games, we may even allow P/X. Phone or write with details!!

Remember to tell your friends!!! That Cyber machines are of the highest quality and our megadrives are modified to play both Japanese and American software!! And they'd be a wally to buy from anyone else!!

Send cheques and P.O.'s to: **CYBER TECH DISTRIBUTIONS**,
40 Long Street,
Dursley,
Glos. GL11 4JB

PD & SHAREWARE

who do you get yours from?



There are many PD libraries around but do they offer you....

- ★ Huge collection, thousands of programs on over 3000 disks
- ★ Same day service - 1st Class post - GUARANTEED
- ★ Knowledgeable staff on hand (no 'phone after six and ask for fred'!)
- ★ Three years experience collecting and distributing PD & Shareware to satisfied customers all over the world.
- ★ FREE 30 page catalogue, S.A.E (28p stamp) and state MAKE of computer CLEARLY and we'll rush one to you by return.

AMIGA

Currently over 800 disks in our catalogue, including Fred Fish, APDC, AMICUS, Panorama etc. Our own SOF collection is so good other libraries stock them now and of course we are exclusive distributors of the fabulous UGA disks. All are auto-boot, menu driven and so very easy to use, probably the best collection available! We also run an Amiga Club, ask for details.

ATARI ST

We currently stock over 800 disks full of PD/Shareware for these machines, containing every imaginable type of program! Choose from ALL the Public Domain, not just "a selection". If you are new to ST'ing why not join "Clubville", our popular user group, £6.50 gets you newsletters, offers, special prices on goods, 5% Off blanks/PD etc.

IBM PC

(and compatibles)

Thousands of the most popular Public domain and Shareware programs in our current catalogue, all available on either 3.5" or 5.25" format, if ordering (opposite) state which. Whatever type of program you may require, we've probably got it.

MEGA PACK - £19.50 (£14.50)

5 PD disks + 5 blank disks
plus a Library case

(Selection of current popular titles),
INTRO DISK - £1:50

(Atari or Amiga only)

VIRUS KILLER DISK - £1:50

(state machine clearly)

(prices in brackets for 3.5" disks, also preferred)

24 Hour orderline on

0705-266509



SOFTVILLE

Unit 5, Stratfield Park,
Electra Avenue, Waterlooville,
Hants. PO7 7XN



PC SUPER GRAFX

PC ENGINE	
PC ENGINE PAL	
inc. 1 game	£169.95
PC ENGINE SCART	
inc. 1 game	£159.95
CD ROM PLUS INTERFACE	£299
PE ENGINE SUPER GRAFX	
PAL	£289.95
SCART	£269.95

PC ENGINE GAMES

DRUNKEN MASTER	16.90
TALE OF THE MONSTERPATH	16.90
WONDERBOY	16.90
CHAN AND CHAN	16.90
GALAGA 88	19.90
DRAGON SPIRIT	19.90
SPACE HARRIER	19.90
MOTO ROADER	19.90
R-TYPE 1	24.90
VIGILANTE	22.90
FANTASY ZONE	22.90
VICTORY RUN	24.90
NAMCOT BASEBALL	24.90
PACLAND	25.90
WATARU	27.90
WORLD COURT TENNIS	29.90
R-TYPE II	31.90
LEGENDARY AXE	31.90
SON SON II	29.90
NAXAT OPEN	29.90
DUNGEON EXPLORER	29.90

P-47	31.90
SIDE ARMS	32.90
CYBER CROSS	31.90
NINJA WARRIORS	31.90
BLOODYWOLF	31.90
BREAKIN' BILLARDS	31.90
TIGER HELI	32.90
ORDYNE	32.90
GUNHEAD	32.90
F1 DREAM	31.00
DORAEMON	31.90
DIGITAL CHAMP	31.90
ALTERED BEAST	32.90
USA BASKETBALL	32.90
PC KID	32.90
F1-TRIPPLE BATTLE	32.90
KNIGHT RIDER	32.90
HEAVY UNIT	32.90
VOLFIED	32.90
MR HELI	32.90
SHINOBI	32.90
TAITO MOTORBIKE	
RACING	32.90
WRESTLING	32.90
CHASE HQ	33.90
TIGER ROAD	33.90
ATOMIC ROBO KID	33.90
NEW ZEALAND STORY	33.90
SPLATTER HOUSE	33.90
BULL FIGHT BOXING	33.90
PARANOIA	33.90
SUPER VOLLEYBALL	33.90
SPACE INVADERS PLUS	33.90
CITY HUNTER	33.90

ARMED FORMATION	33.90
POWER DRIFT	33.90
DOWN LOAD	33.90
IMAGE FIGHT	TBA
OPERATION WOLF	TBA

CD ROM GAMES

STREET FIGHTER	33.90
ALTRERED BEAST	33.90
WONDERBOY III	33.90
SIDEARMS SPECIAL	33.90
VARIOUS II	33.90
RED ALERT	33.90
FINAL ZONE II	33.90
BASEBALL	33.90
SUPER DARIUS	33.90

SUPER GRAFX

BATTLE ACE	33.90
GRANZORT	33.90
GHOULS 'N' GHOSTS	TBA
STRIDER	TBA

SEGA MEGADRIVE

PAL inc. 1 game	£179.95
SCART inc. 1 game	£169.95

SEGA MEGADRIVE GAMES

ALEX KID	24.90
MR KOMATSU	24.90
ALTERED BEAST	29.90
SUPER THUNDERBLADE	31.90

SPACE HARRIER II	31.90
BASEBALL	32.90
THUNDERFORCE II	32.90
WORLD CUP SOCCER	32.90
GOLF SUPER MASTERS	32.90
GHOULS 'N' GHOSTS	37.90
RAMBO III	33.90
LAST BATTLE	33.90
SUPER HANG ON	33.90
FORGOTTEN WORLDS	33.90
TATSUJIN	31.90
KUJAKIUIH II	31.90
HERZOG ZWEI	32.90
SOKO BAN	32.90
ZOOM	32.90
GOLDEN AXE	34.90
CURSE	32.90
FINAL BLOW	34.90
SUPER DARWIN	33.90
ASSAULT SUIT LEYNOS	39.90
AFTER BURNER II	34.90
DJ BOY	24.90
GHOSTBUSTERS	JUNE
SUPER MONACO GP	JUNE
MOONWALKER	JUNE
E-SWAT	JUNE
HARD DRIVIN'	AUG

SNK NEO-GEO

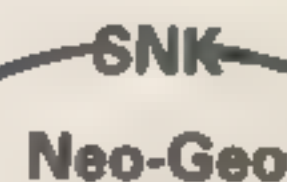
NEO-GEO	£450
BASEBALL	£199
GOLF	£199
NAM 75	£199
MAGICIAN LORD	£199

Please make cheques and P/O's payable to: **NEW WORLD CONSOLES**, Dept NCE, III Stainmore Road, Bedford MK41 0PZ. Tel: (0234) 286352.

Please add £1.00 p&p for games and £5.00 for machines.



SEGA MEGA DRIVE



SUPPLIERS

Most of these computers are available through High Street outlets, but if you have difficulty ring the manufacturers:

Z88
Cambridge Computer
Tel: 0223 312216

POQET PC
Poqet
Tel: 0753 5/80018

TANDY 102
Tandy
Tel: 0922 710000

HUSKY HUNTER 16
Husky
Tel: 0203 668181

ATARI PORTFOLIO
Atari
Tel: 0582 37171



• The Hunter is tough, compatible and extremely expensive. Corporate entities only.

option that will run PC spreadsheets and databases and write to a PC disk for transfer to the larger system. An elastic strap on the rear of the Hunter makes it possible to 'wear' it on one arm while keying in data with the other. The keyboard layout makes this easier for a right-handed person but perfectly possible for a left hander.

Husky produces machines and software to order and offers a bespoke service. An application to suit your needs can be supplied locked into the machine. Prices start from, wait for it, around £3,444 including a disk drive.

ATARI PORTFOLIO

The Portfolio falls into the same size category as the Poqet, fitting neatly into a jacket pocket. There the similarities stop. While the £1,552, Poqet is designed as a scaled-down full feature PC, the Portfolio provides a similar size solution for the person on a limited budget. £250 buys you a machine with tiny keys that will frighten away typists and an early version of MS-DOS that will be familiar to PC users, but with only 128k of RAM it will balk at the larger, more up to date, applications.

A 256K ROM (Read Only Memory) contains a time manager, calculator, address book, tone dialer, text processor, and spreadsheet.

The spreadsheet can export data to popular spreadsheets like Lotus 1-2-3. The text processor produces files that can be transferred to a PC and imported into a word processor for formatting and final output.

An expansion port allows you to add a serial interface or parallel port. A credit card RAM card system similar to the Poqet PC looks after storage. RAM cards of 32K, 64K, and 128K are available and extra RAM slots can be added via a special interface. A memory card drive for a PC is available to make direct transfer of data possible.

The display normally shows 40 columns by 8 lines, but a full page mode is available that windows a full 80 columns by 25 lines display.

Atari's machine was designed by a company called DIP, and you may well see grey imported versions around bearing that firm's moniker. The Portfolio is getting into the same region occupied by the Sharp personal organisers and other pocket electronic Filofaxes such as the Psion Organiser and the MicroWriter Agenda. Useful devices all, but text entry is awkward and difficult. ■

ROUND UP

There is no clear winner as each of the notebook computers addresses a different problem. None has the responsive full keyboard a laptop but the Tandy 102 comes close. You can learn to live with a small windowed letter box display but the full 80 columns by 25 lines is welcome on the return to the full sized machine.

In short, whichever you choose, from the £250 Portfolio to the £3,000-plus Hunter, it is bound to be a compromise in one way or another.

The good keyboard of the Tandy 102 is marred by its lack of RAM. The excellent on-board programs of the Z88 are hindered by the rubber keyboard and its occasional forgetfulness. The well-featured Poqet compromises with its credit card applications, but wins points for a usable keyboard and good display.

The Husky Hunter 16 is rugged enough to stand everything except touch typing, and Husky will tailor any machine to any task, but so it

should for the price.

The Portfolio demands special interfaces to communicate with the outside world and it has a terrible keyboard, but it is cheap.

Pick the machine that suits your needs and pocket best, but if you want a machine that behaves like your office PC and don't need to be able to put it in your pocket, a laptop with disk drives is probably a better option.



• Atari's Portfolio is the closest to an electronic Filofax, but it uses a Lotus-compatible spreadsheet.

More Xe

I've been buying *Express* since Issue 32 when I first noticed that you covered the Atari 8-bit in your format columns. Since then I've seen the column cut by half, with an average of 200 words per issue.

The Atari 8-bit has more users than the MSX, QL, Archimedes and the now-dying SAM, and considering that its basic design concept has been around for almost 11 years and was created by some of the team who went on to make the Amiga, it still has a large dedicated user base in Britain and on the Continent.

I cannot see why a computer which offers such facilities as hardware scrolling, 256 colours on screen at any one time, hardware sprites, a custom sound chip (which is superior to those in the ST, C64 and other 8-bit computers) and expansion ports that offer up to 8-10 thousand bits of unbuffered data transfer per second via the Parallel Bus Interface (BOOXL) or the Enhanced Cartridge interface (130XE and later models of 65XE) as well as a standard cartridge port on both models, has to put up with a mediocre column which is hardly ever printed anyway (take the last three weeks for example).

I just hope you see fit to increase the size of the column and get rid of the awful blotchy CPC screenshots at the same time.

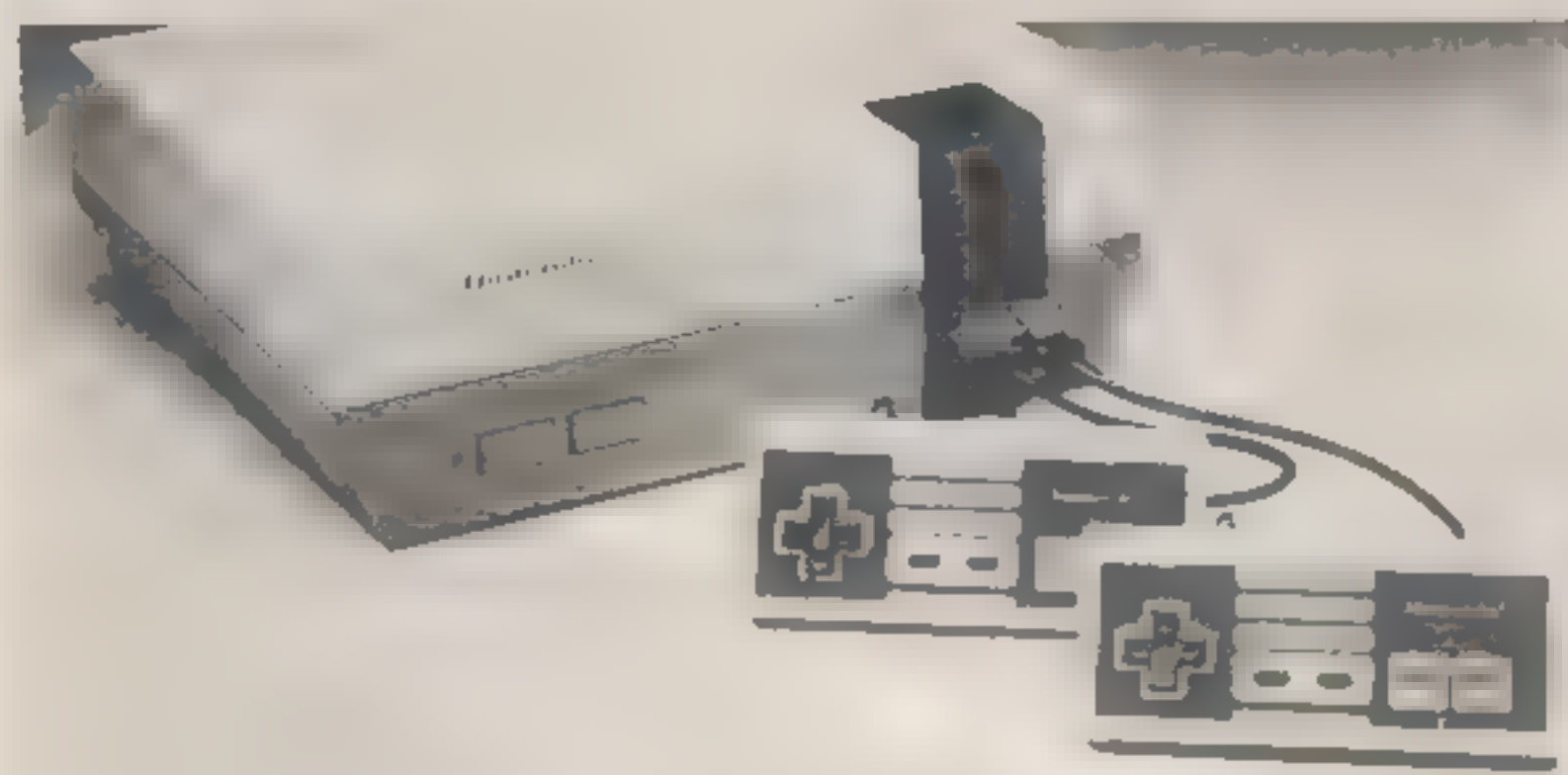
C Roberts, Clwyd

Sceptical wordsmith

Being naturally sceptical of words without vowels, I took the trouble to investigate when a shareware Scrabble program awarded itself a handy score for the word 'ST'. Surprisingly, it exists, and is defined by *The Shorter Oxford Dictionary* as 'an exclamation used to drive an animal or to urge it to attack.'

Presumably the uncertain nature of the animal's choice of two permitted reactions rendered the word of doubtful utility.

Deceptive vision



When is computer not a computer? Confused ... well let Express console you!

Do my eyes deceive me or is *Express* shrinking? What, in particular, has happened to *Express Mail* - a personal favourite of mine?

This section came out to only one



accounting for its disuse in modern language; but there is still one entity which reacts to the syllable in the defined manner. I refer, of course, to the Amiga user.

Iolo Davidson, Tetbury, Glos

A sting in the tale in true Iolo Davidson tradition. My only memories of ST were on the army barrack square where a very noisy drill sergeant used to bellow ST... wait a minute I haven't said it yet, stand in line you ticktocking heathen ST... ST... STAND AT EASE... ST.....ST... STAND EASY. Then again he probably didn't have an Amiga either.

World's longest letter

In last week's *Express* there was comment about the Crystal Unicorn and the 64 columnist, Pete Gerrard. The lengthy letter was called '64,64,64,' and it was from 'Anon of Copmanthorpe, Yorks.'

The remarks about constant plugging of Crystal Unicorn were grossly unfair. We were mentioned in the 64 col-

EXPRESS MAIL

Britain's liveliest computing forum - packed with comment, controversy and conflict. Write and tell us what you think! Reach us at: *Express Mail, 30 Monmouth St., Bath BA1 2AP*. Sorry, no personal replies, even with an SAE. This week's replies written by Keith Pomfret.

umn with praise from Pete Gerrard only because I think we are an organisation worthy of the reader's interest.

We have had a fair bit of the cane from Pete - more criticism, in fact, than plugging. A look at back issues of *Express* will prove this beyond all doubt.

Although we know that the 64 will eventually be replaced, we are dedicated to promoting it in the hope that with enough support, the 64 has a hell of a long life left yet.

'Anon' should look at his C64 and also at the poorly covered columns in the few remaining magazines that bother to cover the format at all. He should ask himself why I find so little around by way of C64 coverage.

Now, anyone with an ounce of memory will tell you that Pete Gerrard, far from being just another columnist, has a track record worthy of a double page profile in this very weekly. He's been with the C64 since its birth, and he has written books on the beast.

I see no reason why he is given so

little space in which to do a decent presentation. That very pathetic little cube on the format pages of *Express* in which he is forced to crush his items could be filled every week with a hundred times more information.

There can be little excuse from whoever it is that allocates space for formats, articles, etc. If all 64 users would write in to Pete Gerrard, or better still, write in to the editor of *Express* to support the C64 column, it will go a long way to securing a larger column for everyone with a C64.

Dave Mason, Walton Highway, Nr Wisbech, Cambs

Your nearly 1,000 word epistle has been trimmed to slightly less than half of its length in order to allow *Express* space to reply. We applaud your stand for the C64, and with the dedicated support you promise it, I'm sure it will last some time yet to come.

A quick bout of phoning confirmed that peripheral suppliers and software houses agree with you, and that the

replies as much as the letters.

To change the subject, should consoles be included under the heading 'computers'? Whatever I said in a dictionary, I do not believe that the public's perception of a computer in any way would include a console.

No matter what the processing power in the box, I would not call them computers. While I find a snippet in the news section on consoles interesting, I think that is as far as it should go. Surely even *Express* would draw the line on giving a full review of the latest 'Game and Watch'.

A H Foster, Bassett, So'ron

Express doesn't suffer from seasonal shrinkage as much as some publications, but the amount of news/features

and columns can vary from week to week, and sometimes something has to give.

If you take a careful inventory of *Express*, you will see that there is no prejudice involved. Any section of the magazine could come under the editorial surgeon's knife.

The 'is a console a computer?' debate seems to be equally supported by both sides ferociously claiming that it is or isn't.

The decision by some of the console manufacturers to consider keyboard add-ons will muddy this water even further.

Where should we draw the line? Nowhere. *Express* will remain flexible enough to judge products on the basis of individual merit.

stock levels carried for the C64 are indeed comparable with other machines. Your comments on the amount of coverage of the C64 in the magazine have been passed on to the powers that be and will be dealt with accordingly.

Declare a share

Thanks for printing my letter in *Express* 84, and may I take this opportunity to answer some of the points you made?

You say that pirates break the law and PD libraries don't, although in your second point you say that PD libraries are breaking the letter of the law?

Also, if you don't place ads in the Reader's Ads section from companies, how does CEDM, with its Amiga disk magazine, and Fastline, with its Sam PD library, to name but two, get to advertise? (*Express* 82).

At the top of the Advantage advert it says 'Best PD and Shareware available', but nowhere in the ad does it say likewise. So, if I were to purchase any one of the Amiga packs, I would not know if it were PD or Shareware until it arrived, would I?

Now I understand what you mean when you said 'we only accept legal, decent, honest and truthful ads'. I can only reply to this, 'in all honesty you're talking crap.'

Furthermore, since you are telling me to exercise my right not to buy if I think the price is too high, does that mean you think £21.95 for 9 PD disks is fair?

Jeff, Tyne & Wear

I had always thought Tyne and Wear was another planet. You have confirmed it. I will take your points in the order that they occur.

Read what we wrote before climbing on to your high horse. The reply said that PD libraries MAY be breaking not ARE breaking the law.

We try to weed out commercial operations from the Reader Ads, but it is sometimes difficult to draw the line between home-run enthusiast's operations and full blown commerce. Keep us informed of any blatant rule breakers.

You could always ring Advantage and ask for clarification if you do not understand the advert.

About our integrity as far as ads are concerned: were you brought up to use bad language in letters or did you have to practice in front of the mirror?

As for PD: if the quality and content of the software and the disks is good, then just over £3 a disk represents enormous value. Of course, value is a personal thing dependent upon perceived needs and utilisation.

Pure conjecture

Your magazine gets more like *The Sun* every day. When I started taking it a year ago, it was a sensible computer magazine that stayed within the bounds of the possible and only occasionally slipped into the realms of speculation.

Nowadays, the mag is full of conjecture, stories about computers giving birth, impossible hardware and hard hitting sensationalistic news.

All of this leaves a problem that you must sort out immediately. Double the size of the magazine and give us more. Instead of a technical journal, *Express* has life. Keep up the good work and I'll be looking out for the story of a World War II computer found on the moon.

David Lampster-Trough, Tunbridge Wells

We'd just arranged for a ZX81 and a Dragon 32 to be shipped to the moon and you've blown the lid off our story. One thing that you must remember is that today's conjecture and impossible hardware is tomorrow's desktop environment. Ten years ago, the idea of offering a 64K computer with colour was like offering someone, who lived in a garage and ate baked beans, a ballroom with a running buffet and velvet drapes.

Nowadays, the offer of the same computer is the equivalent of asking a guest to do the dishes.

The stories that you consider to be beyond the bounds of possibility now, will be commonplace very soon. Watch this mag!

So there I go

Just a line to let you know that I have stopped purchasing your magazine. I have bought it since its conception, but you obviously don't want me as a reader.

I have sent three adverts to you, but none have been printed. There is nothing wrong with my adverts, they are just as

good as the next. Some people get the same advert entered two or three times in the same edition - others get theirs in week after week. I couldn't manage either!

Since I'm not good enough to have my advert accepted, I'm obviously not good enough to read your magazine - so I have stopped from this week.

PS: I wasted three perfectly good envelopes and three stamps sending in my adverts!

A Frazer London

If you've stopped buying *Express*, you won't be reading this reply, which is a pity as we had a nice explanation planned for you.

Let us know if you start reading again (he can't, he's not reading it - Ed), and we'll address your comments. For those of you who still are reading, look out for some changes in the way we handle the Reader Ads. Our new editor has plans...

Compost corner

Is it really necessary to drone on week after week through the summer with competitions advertising products that no-one particularly wants?

If you're giving away over £500 worth of goods a week, why don't you save up all the money for a year and have one large competition with a prize worth about £26,000? You could even make some interest by saving the money until the end of the year.

With the £26,000 that *Express* proba-

bly spends on lots of little prizes, you could give someone (preferably me - because I'd win anyway) one of every home computer that exists, and a full set of different software and laser printers and things.

Owen Brandreth, Newport Pagnell

If the *Express* competitions weren't popular, we wouldn't have the sacks full of replies from readers eager to get their hands on the booty. To have an annual competition with one huge prize would spoil the fun of winning something for those hundreds of *Express* prizewinners every year. However, if you wish to sponsor the annual competition...

Word stars?

A report in *Express* (75) described a word processor that could configure its keystrokes to emulate other word processors. It was an idea that made it easy for many people who learned on different word processors to use the same machine and document.

Manufacturers should define a rigid set of rules for an operating system. Software writers could be 'persuaded' to use the same commands. If all cars' systems were different, it would be impossible to drive. We shouldn't put up with it on a computer?

Ann Barton, Leominster

We agree with your sentiments. Macintosh is proof that they work. Other manufacturers are coming into line but it will be some time before all machines use the same system.

Hatchback Coupé?

I think there is too much doom and gloom being spread about the demise of the MGT machine. There are lots of people, myself included, who think that the Sam Coupé is the best machine that has been produced since the Spectrum, and it is the natural upgrade for anyone that has outgrown his or her Spectrum.

I know of at least two sources of Sam software. Dave Tonks who has produced eight games so far, and I know that he is working on at least two or three more at present. He has sold the rights of his first 8 to Brian and Ron Cavers who run *Outlet* magazine, which by the way, produces a Sam version of its magazine, both on tape and disk - good value at £2.75 per month.

We at the Spectrum Discovery Club have purchased a Sam with the express purpose of getting one of our members who is conversant with the Opus



The Sam Coupé: far from dead and buried - with plenty of software under development.

Discovery ROM to work on an emulator for the Sam. We have been told by our hardware expert that this should not be too difficult as the Disk controller used by the Sam disk is a close relative of the Opus disk controller.

We are also about to launch a Sam based disk magazine to run bi-monthly

with our Opus offering - anyone interested can contact me at 57 St Saviours Rd, West Croydon, Surrey, CR0 2XE; or phone 081-689-1439.

I hope this shows Sam owners that all is not black - the Sam Coupé is here to stay. B D Mumford, Croydon

We'll be hearing about the Coupé for some time yet.

the couple of weeks since MGT went into receivership there have been enough liferafts and offers of support to rescue the machine and its software from potential oblivion. Rumours that a new, upgraded Coupé called the Hatchback will be released to facilitate a quicker ROM change proved to be unfounded.

COMMENT

Is the law still an ass, so far as computers are concerned? Or are legislators and the legal system learning to cope with computer crime?

As well as the legislators, judges, lawyers, and the police have difficulty in dealing with the intricate and often highly-specialist legal issues that surround the use and abuse of computers. Some years ago, one judge declared to a petitioner that he could not rule that code contained in a chip infringed copyright – he couldn't see anything, and therefore couldn't decide whether or not copyright had been infringed.

At least in America, copyright and patent laws make the judge's task somewhat easier – 'look and feel' clauses in American law have allowed Apple to pursue claims against Xerox for infringement of its WIMP environment. And Lotus has recently obtained a ruling that the menu system for its 1-2-3 spreadsheet can be held in copyright, and is actively seeking to quash clones that work in the same way as 1-2-3, even though the coding is original.

Whether this is 'a good thing' for the software industry or indeed for the

consumer is not yet clear – arguably, such 'look and feel' legislation could lead to a monopoly on ideas and a stifling of creative software development. On the other hand, innovators need to see that due reward can be derived from the implementation of an idea. This means that some level of copyright protection for ideas and approaches as well as for chunks of code is needed.

As is the case with most legal actions, the institution of a new law is just the beginning; only prolonged and expensive litigation can produce a definitive precedent.

On a whole range of fronts, the law is currently struggling to get to grips with the issues that surround computing.

In the UK, the Data Protection Act has not yet proved to be a major asset to the individual in securing the right to ensure that information held on computer is accurate. At one fell swoop, most of the data held on the computers

of government agencies is exempted, and even the credit reference agencies still blacklist an address rather than a name. You may be refused credit, even if your personal record is spotless. According to the Registrar, some 30 cases have been brought since the Act became law – and most have resulted in a £200 fine. Hardly a major deterrent.

Disturbingly, the Act is now being used by some litigants as a rod to beat the backs of organisations with which they disagree – both the National Front and the National Viewers and Listeners Association have been the subject of recent complaints that appear to be motivated by a difference in political opinion rather than the desire to see justice done. This is effectively an abuse of the Act, which was drafted to protect the rights of the individual living in a computerised society.

Another aspect of Datacrime – hacking – can now be addressed under the provisions of the Computer Misuse Act, but the powers it confers on the police force seem unlikely to worry the serious hacker who is using a modem for commercial gain. The penalties are severe, but as the definition of terms such as 'computer' are not made explicit by the Act, there will have to be a long round of test cases before m'learned friends get a firm grip on the subject.

The law has little difficulty in protecting the individual's rights to physical property. The day when intellectual property, as it relates to computer data or programs, achieves a similar level of protection is still a long way off.

Justice is still not being done.

NEXT WEEK

PSION SCIENCE
Express test drives the new MC 400 portable

SHARE AND SHARE ALIKE
Stockmarket speculation from your desktop

PLUS

- The Shopping Express guide to Word Processors
- Tech Tips: advice
- Letters: The best debate outside of Parliament

WITH

A column for your machine.
ST, PC, Amiga, C64, Spectrum, Archimedes, BBC, MSX, QL, PCW, CPC and SAMCoupé

FROM THE ARCHIVE

ONE YEAR AGO

Computer hackers were given an eleventh-hour reprieve as the long-awaited anti-hacking Bill failed to make it through the House of Commons.

Tory MP and ex-programmer Emma Nicholson had lobbied Parliament for months in a bid to give hackers a hard time. She wanted to jail 'computer criminals' for up to 10 years.

When Nicholson's Private Member's Bill was due to come before Parliament however, it wasn't considered important enough for debate, and as such it received no hearing.

A UK version of the Japanese games console, the PC Engine, was planned in secret.

The machine sold half a million units in its first month on sale in Japan, and the

firm's British HQ was seriously monitoring the grey imports.

- A year later the promised machine is still a reflection on the water below the rising sun.

CD games arrived in the shape of a 10 game disk for the C64 which could be loaded from a standard CD player via a special interface supplied in the pack.

The games loaded in about 30 seconds and connected to a CD player through the headphone socket.

Hailing from German firm Rainbow Arts, the pack included *Dropzone*, *Impossible Mission*, *Fist II*, *David's Midnight Magic*, *Mission Elevator*, *Mule*, *Jinks*, *Loderunner*, and *Solomon's Key*.

What is more, the price came in at a quite reasonable £29.99 – including the interface cable.

A survey in Express revealed that the average reader had spent £144 on hardware, £46 on serious software and £34 on games in the two previous months.

Further survey results showed that:

- 15 per cent of readers planned to buy a PC within the next 12 months
- 13 per cent wanted an Amiga
- 12 per cent wanted an ST

- The Archimedes weighed in at a healthy 8 percent
- MGT's SAM Coupé was craved by at least three per cent of Express's readers
- 84 percent used their computer for serious and leisure purposes
- 12 per cent used their computers for games only
- At least two thirds of the people surveyed used a computer at work.

The Department of Social Security (formerly DHSS) overspent its computerisation programme by over a billion pounds while trying to replace the outdated manual system.

The programme – at the time Europe's largest computerisation plan – was costed at £1,749 million instead of the promised £713 million.

Horrified planners had to make drastic cuts elsewhere in the department to meet the costs.

Amstrad slashed between £50 and £150 off its 2086 machines in an effort to increase its share of the 8086 market.

Eight computer companies were dragged across the coals by the Advertising Standards Authority.

These included Amstrad, Castle

Computers, Ladbroke Computing International and Silicon Vision.

Newcastle computer dealer Brian Dixon finally gave in to pressure from a large high street chain of the same name. He changed the name of his shop from Dixon's to Micro-Tyne.

TWO YEARS AGO

Amstrad board member Jose Luis Domingues, boss of Amstrad's Spanish operation, embarrassed his parent company by leaking details of four planned products to Spanish weekly computer magazine, *Tribuna Informatica*.

DTP and mouse specialist AMS who brought the mouse to many of the 8-Bit computers as well as the PCs was gobbled up by multi-national arch-rival Logitech.

Acorn won the right to supply Archimedes computers to schools in its home county of Cambridgeshire.

The deal was worth over £300,000 initially and underlined Acorn's stronghold on the educational market.

(sources: New Computer Express and Computer Trade Weekly).

RETURN THE COUPON FOR FREE COLOUR BROCHURES!

NEW! - AMIGA PACK

Commodore A500
Flight Of Fantasy

£399

INC VAT



A500 BATMAN PACK



The Commodore A500 Batman Pack must surely rank as one of the most popular computer packs ever! The pack features the Commodore Amiga 500 computer with mouse controller and TV modulator, plus four top software titles. The software includes: 'Batman The Movie' - Rid Gotham City of the cunning joker, in Ocean's top selling title based on the blockbuster Batman film; 'New Zealand Story' - high quality conversion of the leading arcade game; 'Interceptor' - Dogfight with two F-16's in this leading flight simulator; 'Deluxe Paint II' - top quality Amiga graphics package which set the standard for others to follow. Return the coupon for further details.

PACK INCLUDES:

A500 Computer & Mouse	£399.99
A520 TV Modulator	£24.99
Batman The Movie	£24.95
New Zealand Story	£24.95
Interceptor	£24.95
Deluxe Paint II	£49.95

TOTAL RRP: £549.78

Less Pack Saving: £150.78

PACK PRICE: £399.00

£399

INC VAT

AMIGA 2000



For the more serious or professional applications user, Commodore have a selection of systems based around the expandable Amiga 2000, at prices from £1295+VAT. The A2000 features a full 1Mb RAM (expandable to 9Mb), 9 system expansion slots, plus IBM compatibility with the use of PC-XT or PC-AT bridgeboards. Complete and return the coupon, putting a tick in the A2000 box, for details of A2000 computer systems.

£1295

+VAT= £1489.25

FLIGHT OF FANTASY

Flight of Fantasy is the very latest Amiga 500 pack from Commodore, featuring BRAND NEW software releases, to make this the most spectacular A500 pack ever! The pack features the Amiga 500 computer with mouse controller and TV modulator, as well as four top software titles. These include the following:

DELUXE PAINT II:

The high quality graphics program that set the standard for other Amiga art packages. Deluxe Paint II includes powerful, easy to use tools that bring out the artist in you. Create masterpieces, presentations, 3D perspectives or just doodle.

ESCAPE / ROBOT MONSTERS:

Here's something completely different - a science fiction story with comic book style graphics. Our heroes Jake and Duke are on the Planet X rescuing Humans who have been captured by the Robot Monsters and forced to create an evil Robot Army to DESTROY EARTH! Jake and Duke fight their way through hordes of evil Robots to help the Humans escape.

RAINBOW ISLANDS:

Slip on your magic shoes, practise throwing a rainbow and you're ready to go island hopping. From the Island of Doh to Monster Island, you will encounter Doh himself, stinging insects, lethal combat machines, mechanical assaults, the formidable beings of legend and folklore. Finally enter the world of darkness and its inhabitants.

F29 RETALIATOR:

The ultimate in flight simulation with a choice of two aircraft and four battle environments with dozens of different tactical missions. Aerial combat, strategic bombings, interactive ground based battles, seagoing carriers... the list of features is endless. Real time cockpit displays, including 'true radar' enhance the realistic feel of this stunning simulation.

PACK INCLUDES:

A500 Computer & Mouse	£399.99
A520 TV Modulator	£24.99
Deluxe Paint II	£49.95
Escape/Robot Monsters	£19.99
Rainbow Islands	£24.95
F29 Retaliator	£24.95

TOTAL RRP: £544.82

Less Pack Saving: £145.82

PACK PRICE: £399.00

£399

INC VAT

FOR FURTHER DETAILS OF THE AMIGA RANGE, COMPLETE THE COUPON AND RETURN IT TO SILICA SHOP
THE UK's No1 AMIGA SPECIALISTS

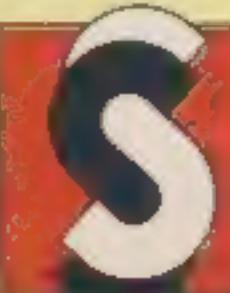
SILICA SHOP OFFER YOU

FREE OVERNIGHT COURIER DELIVERY: On all hardware orders shipped in the UK.
TECHNICAL SUPPORT HELPLINE: Team of Amiga technical experts at your service.
PRICE MATCH: We normally match competitors on a "Same product - Same price" basis.
ESTABLISHED 12 YEARS: Proven track record in professional computer sales.
£13M TURNOVER (with 60 staff): Solid and reliable with maintained growth.
BUSINESS/EDUCATION/GOVERNMENT: Volume discounts available for large orders.
SHOWROOMS: Demonstration and training facilities at our London & Sidcup branches.
THE FULL STOCK RANGE: All of your Amiga requirements from one supplier.
FREE CATALOGUES: Will be mailed to you with offers and software/peripheral details.
PAYMENT: By cash, cheque and all major credit cards.
CREDIT PAYMENT TERMS: Silica are licensed credit brokers - return coupon for details.

Before you decide when to buy your new Amiga computer, we suggest you think very carefully about WHERE you buy it. Consider what it will be like a few months after buying your Amiga, when you may require additional peripherals or software, or help and advice with your new purchase. And, will the company you buy from contact you with details of new products? At Silica Shop, we ensure that you will have nothing to worry about. Silica have been established for over 12 years, and have an annual turnover of £13 million. With our unrivalled experience and expertise, we can now claim to meet our customers requirements with an understanding which is second to none. But don't just take our word for it. Complete and return the coupon now for our latest Free literature and begin to experience the "Silica Shop Service".

RETURN THE COUPON NOW FOR
FREE BROCHURES

SILICA SHOP



MAIL ORDER: 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX Tel: 081-309 1111
Order Lines Open: Mon-Sat 9.00am-6.00pm No Late Night Opening Fax No: 081-309 0608

LONDON SHOP: 52 Tottenham Court Road, London, W1P 0BA Tel: 071-580 4000
Opening Hours: Mon-Sat 9.30am-6.00pm Late Night: Thursday until 8pm Fax No: 071-323 4737

SIDCUP SHOP: 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX Tel: 081-302 8511
Opening Hours: Mon-Sat 9.00am-5.30pm Late Night: Friday until 7pm Fax No: 081-309 0017

BUSINESS/EDUCATION: 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX Tel: 081-308 0888
Order Lines Open: Mon-Fri 9.00am-6.00pm Closed on Saturdays Fax No: 081-308 0608

To: Silica Systems Ltd, Dept NCE-0790-32, 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX

PLEASE SEND INFORMATION ON THE AMIGA

Mr/Mrs/Ms: Initials: Surname:

Address:

Postcode: Tel:

Which computer(s), if any, do you own? A2000 ☐

EO&E - Advertised prices and specifications may change - please return the coupon for the latest information.

If you think all
COMPUTERS
are created equal . . .
try CARRY-I first.



CARRY-I

A Refreshing Idea . . .
A new Standard . . .
Computing Goes Better With CARRY-I

- It's fully IBM compatible, and is capable of running thousands of your favourite application software.
- You can easily move it or carry it anywhere, because it's so small and light.
- Compared to a full sized PC, CARRY-I will get your jobs done using less space.
- Its well designed exterior and unique size not only looks good, it's actually great for a modern office.
- You can plug into a standard monitor.
- You can directly plug into your TV (AV Terminal)
- You can use any standard keyboard.
- Stands upright or on its side.
- A one year warranty insures you the reliability.
- If all the above has not persuaded you, the unbelievable price should.

For brochure and further details contact:
LOTAY INFORMATION TECHNOLOGY LIMITED
225 HIGH ROAD
WILLESDEN
TELE: 081 451 6277
FAX: 081 451 2415
TELEX: 9312132249IL
TELECOM GOLD MAILBOX: 74:SKK467